# Protests and Beliefs in Social Coordination in Africa

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Working Papers / Documents de travail

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WP 2013 - Nr 28

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April 2013

**Abstract**

Leaders' misbehaviors may durably undermine the credibility of the state. Using individual level survey in the aftermath of geo-localized social protests in Africa, we find that trust in monitoring institutions and beliefs in social coordination strongly evolve after riots, together with trust in leaders. As no signs of social unrest can be recorded before, the social conflict can be interpreted as a sudden signal sent on a leader's action from which citizens extract information on the country's institutions. Our interpretation is the following. Agents lend their taxes to a leader with imperfect information on the leader's type and the underlying capacity of institutions to monitor her. A misbehavior is then interpreted as a failure of institutions to secure taxes given by citizens and makes agents (i) reluctant to contribute to the state effort, (ii) skeptical about the contributions of others.

**Keywords:** Social conflicts, norms of cooperation, trust, institutions.

**JEL codes:** D74, D83, H41, O17.

*We would like to thank Yann Algan, Matteo Cervellati, Mathieu Couttenier, Marcel Fafchamps, James Fenske, Pauline Grosjean, Clément Imbert, seminar participants at Oxford and AMSE, and the audience at EEA and RES meetings for very useful comments.

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# 1 Introduction

In environments with imperfect access to information, an apparently minor signal may drive beliefs in the viability of current institutions far from their previous levels. Once a signal is sent that leaders extract rents, a large fraction of the population may not believe in social cooperation anymore, refuse to invest in the state and dampen for quite a while the provision of public goods. Agents revise their priors and infer that institutions are insufficient to protect their investments in the state. This rational update might lead to unstable dynamics where an entire country switches in few days from national coordination to identity fall back. Trust is not only a capital which slowly accumulates over decades. Beliefs in institutions and leaders also reflect forward expectations, which are subject to large volatility.

In this paper, we investigate the evolution of trust toward leaders, monitoring institutions, and beliefs in social cooperation immediately after social protests. We first propose a stylized model of public good provision where both the honesty of the leader and the punishing capacity of institutions are unobserved by citizens. After having observed a protest–a noisy signal of rent extraction by the leader–, citizens revise their priors not only on the executive, but also on the monitoring capacity of institutions. This revision induces agents to be more reluctant to contribute in the state effort because their expectations on the likelihood of retrieving the investment from their taxes are now lower. This mechanism may lead to inefficient state disband: a series of unjustified protests may induce agents to believe (wrongly so) that their institutions are not able to prevent rent capture from leaders.

We test the main predictions of the model using a very localized match between the Afrobarometer survey and a database on local conflicts in Africa–the Armed Conflict Location and Event Dataset. Our identification strategy takes advantage of the precise timing and localization of riots and interviews. We identify the response of agents that are immediately interviewed after the occurrence of a protest in their immediate surrounding. We use respondents that are interviewed just before conflict to demonstrate that social protests are not preceded by lower trust. Our findings indicate very large movements in opinions regarding leaders in charge. More importantly, these changes also affect beliefs in fundamentals, i.e. in monitoring institutions such as the electoral commission or the army, and beliefs in national cohesion. These sudden changes are of the same order of magnitude as long-term differences between regions. The occurrence of a single riot during the previous month within a radius of 20 kilometers reduces the probability for respondents to declare themselves as being part of a nation (as opposed to being part of a local group) by up to a fourth of a standard deviation. The same amplitude is recorded for trust in institutions that supposedly exert some monitoring on the leaders in charge.

Our theoretical framework also predicts that the learning process of citizens on their institutional environment depends on the quality and quantity of information that they already possess. The update should be stronger in the close neighborhoods of the riot, or in places with few observations of protests in the past. We uncover attenuation in the effects of conflicts as the distance with the respondent location increases. Besides, we do find differences in the persistence of changes in beliefs along past exposure to social conflicts. Beliefs seem to change slowly but durably in weakly exposed regions, and seem to change only for a short period in regions frequently affected by social conflicts. We also show that the effect is more pronounced for citizens that have a lower access to public goods.

In this paper, we interpret protests as events that reflect leaders' misbehavior. An alternative interpretation is that protests are orthogonal to the *past* behaviors of leaders. Their mere existence may signal the inability of leaders (and institutions) to prevent them. For example, violent demonstrations of football fans may cast a doubt on the capacity of the executive power to enforce the security of citizens. In order to discard this alternative mechanism, we present results for protests repressed by the government and show that the effect is actually stronger when the government does repress the protest. We also find that the responses of agents reflect the level of local public infrastructures.

An important contribution of our paper is to use very disaggregated data on conflicts and thus capture a localized response both in time and in space. It echoes the call by Blattman and Miguel (2010) to local (e.g. sub-national) investigation and identification of causes and consequences of conflicts. Each riot or protest is precisely located and matched with respondents of the survey to extract how each violent event contribute to explain the local sentiment toward institutions and leaders. The empirical strategy relies on the interaction of the geographic location of respondents and the timing of the survey: we identify the responses of individuals interviewed immediately after the occurrence of a protest in their surroundings–within the next 30 days after an event that occurred in a 20 kilometers radius. The focus on social conflicts rather than on violent events–such as wars or killings–is an original feature of this paper that makes it distinct from recent studies on individual level reaction to conflicts. Our findings on the effects of social conflicts–decrease in trust toward leaders and institutions, and increase in the sentiment to belong the local community–are however consistent with results provided by most of these papers. For example, Becchetti et al. (2011), Nunn and Wantchekon (2011) (building on Nunn 2008), Cassar et al. (2011), and Rohner et al. (2012) (building on Rohner et al. 2011) report that exposure to violent conflict tends to destroy generalized trust. Other studies such as Bellows and Miguel (2009), Blattman (2009), and Gilligan et al. (2011) report that violence events reinforces local social ties. These findings are in line with our observation that the relative reliance on local

groups (as compared to the nation) tends to increase. Our empirical results also provide new evidence on the way agents' beliefs or behavior react in the aftermath of contextual changes (see Grosjean et al. 2011 and Shayo and Zussman 2011 for example).

Overall, our results show that beliefs are very volatile. Distrust or trust allegedly reflect forward-looking expectations in the fairness of the leaders in power and in the efficiency of the institutional setting. Similar to Alesina et al. (2003) who highlight the existence of self-fulfilled expectations, our model predicts that agents are tempted to invest less in the state when they anticipate that such an investment will be inefficient. Along the same lines and in the spirit of Besley and Coate (2001), Besley and Ghatak (2001), and Besley and Persson (2010, 2011), a low capacity to raise taxes keeps the state under the threat of internal conflicts. The volatility of beliefs contrasts with the literature on persistence and long-lasting resentments. On this issue, Nunn (2008) and Nunn and Wantchekon (2011) link today's development failure and distrust in Africa to historical slave trade intensity. Distrust in the quality of institutions is one of the mechanisms through which such situations persist: trust shapes the demand for regulation, and institutions (Aghion et al. 2010), a low level of trust would affect durably economic performance.

The remaining of this paper is organized as follows. In section 2, we propose a simple theoretical framework that highlights the interplay between signals of leader's behavior and citizens' beliefs in the quality of institutions. We then provide empirical evidence that support the theoretical predictions of the model in subsequent sections. Section 3 details the methodology to construct the dataset, provides some descriptive statistics, documents the exposure to civil conflicts and inclinations toward state institutions, and presents the empirical strategy. In section 4, we present the empirical evidence constituting the main results of the paper. Section 5 briefly concludes.

# 2 Theoretical framework

In this section, we present a simple model where agents need to coordinate and invest in a public good. To do so, they transfer control rights over the use of their taxes to a leader. Both the honesty of this leader and the monitoring capacity allowed by the institutional environment are imperfectly observed.

When the leader extracts private rents or reneges on an electoral promise, the society relies on two punishing devices. First, institutions deprive the leader from a part of her revenues. This quantity–the formal punishing capacity of institutions-is unobserved by citizens. In addition, citizens can protest and capture part of the extracted rent on top of the punishment already inflicted by institutions. This informal punishing power of the society is perfectly

known.

We introduce a third party (an information agency) who gives information on the action taken by the leader. The signal is observed by current citizens who decides then to incur the cost of a protest in order to retrieve their tax revenues. The information is also processed by future generations who revise their beliefs on the capacity of monitoring institutions to avoid predatory behaviors by the leader. As such, the action of a leader in a certain period may durably affect the way agents invest in taxes and participate in state building. Citizens will be reluctant to invest knowing that future leaders may easily capture the benefits from their investment without being punished.

## 2.1 Setting and hypotheses

Consider a simple economy that lasts for an infinite number of periods. At each period, the economy is populated by three types of agents. First, there are two risk-neutral *citizens* (say that they are homogeneous groups, each representing half of the country) indexed by $i = 1, 2$. These citizens are short-lived and new generations of citizens with the same features are born every period. Second, there is a unit mass of potential *leaders* with unobserved altruism. We exclude reelection concerns for leaders and assume that they are also short-lived. Finally, there is an impartial and infinitely-lived observer–the *information agency*–who observes the actions of the leader and inform the citizens. This agent will be benevolent and can also be considered as a group of active and benevolent citizens.

The citizens have linear preferences over the consumption of a unique final good. This good can be produced with a private technology delivering $t$ units of final goods for $t$ units invested, or with a public technology necessitating the intervention of the leader. If the leader implements the public project in which citizens have invested $T = t_1 + t_2$, each citizen receives half of the total welfare returns $RT^{\rho}$. We assume that $R$ equals 0 with probability $p$ and $\bar{R}$ otherwise. Let us assume that (i) $\bar{R}(1-p) > 1$, i.e. the public technology creates more surplus than the private one (but is redistributed equally across agents), and (ii) $\rho > 1$, i.e. there are some complementarities between citizens' investments. Citizens voluntarily contribute to the public project by providing $t_1, t_2 \in \{0, 1\}$. They cannot write a contract and force the leader to implement the project.

At each period, a leader is randomly picked among the pool of potential leaders. Her unique decision is to implement the public project or not. Leaders are equally efficient at producing the public good ($\bar{R}$ and $p$ are not leader-specific) but they differ by their incentives to do so. Once the leader is elected and taxes (voluntary contributions in the public project) are collected, the leader can decide to implement the indivisible project

which generates welfare for citizens but no private benefits for her. The leader can also divert resources from the project and capture tax revenues for private use. We assume here that the implementation/diversion choice is binary. This choice depends crucially on her unobserved altruism $1-\varphi$, where $\varphi$ (resp. $1-\varphi$) is the weight attributed by the leader to her own revenues (resp. the welfare of the agents) and is uniformly distributed over $[0,1]$ across of potential leaders.

The role of the information agency is to signal a misbehavior of the leader in the absence of public goods. The observer is benevolent but is not able to fully distinguish between a misconduct from the leader and low investment's return. The probability to signal a misbehavior (resp. a project failure $R=0$) conditional on a misbehavior (resp. a project failure) is $1-s$. The signal is observed by all citizens.

Finally, we impose very stylized assumptions on the post-extraction process. After a rent extraction, two independent processes can make a dent in the leader's revenues. First, monitoring institutions incur a deadweight loss, a share $\alpha$ of the extracted funds. Second, if at least one of the citizen decides to initiate a protest at cost $c$, a share $\beta$ of the extracted funds is retrieved and distributed equally to citizens. Naturally, after a protest, citizens know whether the leader misbehaved or not.

All in all, the incentives for a leader to expropriate citizens depend on (i) the quality $\alpha$ of monitoring institutions (standing for courts, army and electoral commission) and on (ii) the informal power of citizens (which also depends on their capacity to detect a misbehavior). Since the cost $\alpha \in \{0, \bar{\alpha}\}$ is a deadweight loss, we assume that citizens have imperfect information on this quantity. They form priors on the quality of their institutions from past observations of protests. In contrast, leaders can observe the value of $\alpha$.

We impose three important assumptions. First, the recovery from citizens is independent of the value of $\alpha$ conditional on the signal received by the information agency. Protests are equally efficient in any environment. Second, leaders base their decisions on the true $\alpha$ rather than on citizens' beliefs. Third, we don't allow for renegotiation.[1]

Within each period, the timing is as follows: at the beginning of the period, new generations of citizens and leaders replace the old ones. They observe past protests and their outcomes and form their priors. Then, (i) a leader is randomly drawn from the pool of potential leaders; (ii) voluntary contributions are made and collected by tax authorities; (iii) the leader decides whether to extract private rents or to create the public project; (iii') con-

[1]In this framework, there would be some room for renegotiation (in the case of a riot, $c$ will be lost). Citizens could negotiate with the leader under the threat of the protest. For instance, leaders may be willing to bribe the citizen at the origin of the protest. This possibility may be thought as group-specific state investments, e.g. the provision of local public goods. The implications of the model would be unchanged with renegotiation as long as the bargaining does not help the citizens to uncover the value of $\alpha$.

ditional on the public project being implemented, the stochastic return $R$ is determined; (iv) conditional on the public project delivering 0 or on a rent extraction, the observer sends a signal; (v) citizens decide whether to protest or not and recover part of the leader's revenues conditional on a protest and a rent extraction.

## 2.2 Static equilibrium

Let us solve the problem backward. In a first step, we will study the decision to protest. Then, we will analyze the leader's choice, given the threat of riots, the state of the institutions and her own type. Finally, we will determine the conditions under which citizens favor the public project over the private technology.

### Decision to protest

Consider first the decision to protest from citizens having invested $t_1 + t_2$. Denote $S \in \{E, I\}$ the signal and $a \in \{E, I\}$ the actual decision of the leader where $I$ stands for an implementation of the project, and $E$ stands for an extraction. If the provision of public goods is 0, the leader may have extracted the tax revenues for her personal benefit ($a = E$) or the leader has implemented an unsuccessful project ($a = I$).

$$P(S = E|a = E) = 1 - s = P(S = I|a = I)$$

Consequently, after having received a signal of extraction $S = E$, the expected benefit from a protest is $(1 - s)\beta(t_1 + t_2)$ to be shared between both citizens. The decision to protest depends on whether $c$ is greater or lower than $(1 - s)\beta(t_1 + t_2)/2$. If the cost is larger than this quantity, no one wants to incur the cost of a protest. Otherwise, $c \leq (1-s)\beta(t_1+t_2)/2$, there are two symmetric equilibria where only one citizen protests. After having received a signal of extraction $I$, the expected benefit from a protest is $s\beta(t_1 + t_2)$ and the decision to protest depends on the comparison between $c$ and $(1 - s)\beta(t_1 + t_2)/2$.

Denote $\chi(T)$ the probability of a protest subsequent to an extraction, where $T = t_1 + t_2$. Given the previous analysis, $\chi(T)$ will either be equal to $1-s$ if a protest only follows positive signals, i.e. $S = E$, 1 if protests follow any signal, or 0 if protests are too costly whatever the signal.

**Decision to implement the project**

Consider a leader with altruism $1-\varphi$. Her decision to implement the indivisible project depends on the maximization of the following program:

$$\max_{a=I,D} \varphi P_a + (1-\varphi)W_a,$$

where $P_a$ (resp. $W_a$) is the private expected benefit (resp. aggregate citizens' welfare) under action $a$.[2]

Given the hypotheses and the outcome of a default, the private benefit and the citizens' welfare under the two actions can be written as:

$$\begin{cases} P_I(T) = 0, \\ W_I(T) = \bar{R}(1-p)(T)^{\rho}, \end{cases} \text{ and } \begin{cases} P_E(T) = [1-\alpha-\chi(T)\beta]\,T, \\ W_E(T) = \chi(T)\beta T. \end{cases}$$

The leader is indifferent between implementing the project given tax revenues $T$ if $\tilde{\varphi}$ is such that:

$$\tilde{\varphi}(T) = \frac{\bar{R}(1-p)T^{\rho-1} - \chi(T)\beta}{1+\bar{R}(1-p)T^{\rho-1} - \alpha - 2\chi(T)\beta}.$$

Leaders with $\varphi > \tilde{\varphi}(T)$ will default while the others will implement the project. $\tilde{\varphi}(T)$ is thus the ex-ante probability of project implementation (remember that $\varphi$ is uniformly distributed). Naturally, the lower the extraction capacity of leaders, the less likely a private extraction. The incentives of the leaders to expropriate also differ with the size of the overall cake. The larger the collected tax revenues and the less likely an expropriation because (i) implementing the project becomes then really attractive, and (ii) citizens may be more likely to protest.

**Decision to invest in the project**

Let us determine the voluntary contributions of citizens. With probability $\tilde{\varphi}(T)$, agents receive half of the welfare created by the indivisible project, and with probability $(1-\tilde{\varphi}(T))$, citizens receive the proceeds of a potential protest.

Note that agents cannot contract here among themselves to ensure that the other party is investing. Had they been able to coordinate and fix both contributions together, the condition for investment would have been $\bar{R}(1-p)2^{\rho-1}\tilde{\varphi}(2) > 1$. However, as in the hold-up problem, agents don't take into account the benefits of their investment on others and the condition for investing will be more stringent.

[2]For simplicity, we assume that leaders do not internalize the private costs $c$ of a protest from citizens.

Remark that $(0,0)$ will always be a Nash equilibrium. We thus study under which conditions an optimistic equilibrium may also exist.[3] The condition under which $(1,1)$ is an equilibrium is the following. When the other agent is expected to invest, the profit under investment $\Pi(1,1)$ should be higher than $\Pi(0,1)$ where

$$\Pi(1,1) = \tilde{\varphi}(2)\left[W_I(2) - W_E(2)\right] + W_E(2) + \left[\tilde{\varphi}(2) + (1-\tilde{\varphi}(2))p\right]\chi(2)c,$$

and

$$\Pi(0,1) = \tilde{\varphi}(1)\left[W_I(1) - W_E(1)\right] + W_E(1) + \left[\tilde{\varphi}(1) + (1-[\tilde{\varphi}(1))p\right]\chi(1)c.$$

Defining $\Delta\Pi = \Pi(1,1) - \Pi(0,1)$, this condition can be written as

$$\Delta\Pi(\alpha, \beta, c, s, p, \bar{R}) \geq 0. \tag{1}$$

Let us assume that agents coordinate on the $(1,1)$ equilibrium when the condition (1) is satisfied. It can be easily checked that $\Delta\Pi$ is increasing in the quality of formal monitoring institutions $\alpha$, and in the quality of informal institutions $\beta$. Similarly, through the probability $\chi$ to see a protest, $\Delta\Pi$ is increasing in the precision of the signal $1-s$ and decreasing in the cost of launching a protest $c$. Finally, $\Delta\Pi$ is decreasing in $p$ for a fixed $(1-p)\bar{R}$ (the risk of the project). When projects are risky, agents know that they will protest for nothing more often.

**Priors on the monitoring institutions**

Until now, we have solved the problem for a known $\alpha$. As citizens do not observe this quantity, we need to determine the condition on their priors that ensures that they invest in the state.

Assume that the condition (1) does not hold for $\alpha = 0$, but holds for $\alpha = \bar{\alpha}$. When institutions are observed, poor institutions cannot sustain a good equilibrium while good institutions are sufficient to ensure that both agents invest. Let us define the probability $\mu \in [0,1]$ such that:

$$\mu\Delta\Pi_{\alpha=0} + (1-\mu)\Delta\Pi_{\alpha=\bar{\alpha}} = 0.$$

When agents' priors on the probability that $\alpha = 0$ is higher than $\mu$, they will not contribute to tax revenues, otherwise, there exists a Nash equilibrium with contributions equal to 1 from both agents.

[3] We assume that $\tilde{\varphi}(1)\bar{R}(1-p) + (1-\tilde{\varphi}(1))\beta\chi(1)/2 < 1$ for any $\alpha$, which ensures that citizens will never invest alone in the public project. As is common in this kind of framework, $(0,0)$ is a Nash equilibrium and there exists a pessimistic equilibrium under which citizens expect the others not to contribute.

We have described so far the within-period mechanisms: the decision to invest from agents depends on their priors on the punishing capacity of institutions. Priors are inherited from the past and their position relatively to the threshold $\mu$ determines the investment in the state from citizens. In the same vein as for the condition (1), it can be shown that $\mu$ is higher when $\beta$ is large. $\mu$ is also higher when the information is of good quality, or the cost of a protest $c$ is small.

The next section characterizes the determination and evolution of priors.

## 2.3 Beliefs' update and state disband

In period $t$, newborns observe the past sequence of signals $\{P_0, \ldots, P_{t-1}\}$ and form their beliefs $\mu_t$ on $P(\alpha = 0)$.

Suppose that some priors $\mu_{t-1}$ are inherited from the past and the generations born in period $t$ has observed a protest revealing a failure to provide the public good from the previous leader. Citizens update their priors on the monitoring process in a bayesian way.

Denote $\psi(\alpha)$ the probability to identify an extracting leader in a country with institutions $\alpha$. With probability $\tilde{\varphi}_\alpha(2)$, the leader extracts. If $\chi(2) = 1$, an extracting leader is always detected and $\psi(\alpha) = \tilde{\varphi}_\alpha(2)$. If $\chi(2) = 1 - s$, an extracting leader is only detected when the signal is positive, i.e. if:

$$\psi(\alpha) = \chi(2)\tilde{\varphi}_\alpha(2) + (1 - \tilde{\varphi}_\alpha(2))p(1 - \chi(2)).$$

With some probability, a well-behaved leader may create a failure. But, as the failure is guaranteed when the leader misbehaves, the probability is always strictly decreasing in $\alpha$ (since $p < 1$ and $s < 1/2$).

The Bayesian update process after having experienced a unique protest is:

$$\mu_t = \frac{\psi(0)\mu_{t-1}}{\psi(0)\mu_{t-1} + \psi(\bar{\alpha})(1 - \mu_{t-1})}. \tag{2}$$

As knowledge keeps piling, the additional information is less and less informative. After having experienced $\tau$ protests before period $t$ and with uniform priors, we get:

$$\mu_t = \frac{\psi(0)^\tau}{\psi(0)^\tau + \psi(\bar{\alpha})^{t-\tau}}.$$

When agents have sufficiently low priors on $\alpha$, an extraction from leaders can lead to state disband if the revision induces a posterior $\mu_t$ lower than $\mu$. Since agents cannot observe the action of the leader when they do not invest (there is no action), there might exist inefficient

state disband: no investment on the long-term despite good institutions $\alpha = \bar{\alpha}$. Such a regime may be fragile as small errors from agents (random investments) may help revealing the quality of institutions. However, the cost of discovering the type of the leaders might be quite high especially because groups cannot coordinate to make the test fruitful if the project is actually implemented.

## 2.4 Predictions

The theoretical analysis presented above entails some simple and testable predictions.

First, the model supposes that protests follow a rent extraction from the leader in charge. Accordingly, we should expect agents to revise their beliefs on the leader and the executive power in the aftermath of a protest. This revision depends on the correlation $\chi$ between protests and rent extraction (and thus an identification of the leader's type). This correlation is lower in places where information is not reliable or in places with very high costs of setting up a protest. The more precise the signal and the more likely protesters will uncover a rent extraction.

Second, agents should not only revise their beliefs on the leader in charge but on the quality of monitoring institutions as well. A signal of extraction leads to a protest. With probability $\chi$, this protest leads to a recovery of tax revenues from an extractive leader. As shown by expression (2), this event modifies the priors of agents on the capacity of institutions to prevent rent capture. As explained above, the effects should be lower when the signal is noisy, either when the media source is imprecise or when an absence of public goods is quite likely to be related with a project failure rather than a rent capture.

Third, the update of beliefs in institutions following a riot should impact the position of priors relatively to the threshold above which citizens stop investing. The protest may affect the willingness of future generations to contribute in the state. As before, this effect should be amplified in environments with a good access to information and in places where the returns on projects are less risky (the absence of public goods is a good signal of rent extraction).

Fourth, protests in the model allow the agents to learn the reasons behind the absence of public goods and incidentally to learn about their institutional framework. For a similar institutional environment, we expect inhabitants of places without a long history of past events to revise more heavily their priors. Similarly, when fewer public projects are implemented, citizens learn slowly and a riot should lead to a large update.

In our empirical analysis, we will test the basic predictions of the model, essentially on the updates of beliefs in the quality of institutions and social coordination. We will also

investigate heterogeneity in the revision. Finally, there is an alternative mechanism through which protests or riots may be associated with changes of beliefs in institutions or leaders. Leaders and state institutions may also be expected to prevent civil riots from occurring. Accordingly, a protest may signal that the state is unable to contain the anger of citizens. We will provide some evidence showing that protests create a higher discontentment when the government actually represses them.

## 2.5 Discussion

The model is very stylized and some assumptions could be relaxed. For instance, the mechanisms described here would hold with only one citizen. The coordination problem before investment would disappear then, leaving only a classic principal-agent framework. We consider as a strong point that a model of public investment accounts for some coordination of citizens. Another concern with the "one agent" version would be that renegotiation with the leader would be easier and leaders may avoid inefficient protests by redistributing ex-post the proceeds of rent extraction.

In the model, we don't allow for a renegotiation before a protest. The reason is that we see the protest as being part of a long-run renegotiation process in which citizens try to retrieve some of their taxes.

Finally, we assume that agents cannot perfectly observe the state of their institutions while leaders can. We need this information asymmetry in order to ensure that the action of the leaders reveals some information to the citizens.

The possibility implied by the presence of two agents offers two natural extensions of this model: (i) break the symmetry between groups, (ii) allow for more than two groups to exist. With more groups, the probability to see an investment would decrease. Each group collects a smaller and smaller part of their own effort as the number of groups increases. The effect of having unequal groups (say in terms of size) on the overall capacity of the economy to invest is more interesting but ambiguous. On the one hand, a larger group would protest more often and constitute a bigger threat for leaders. On the other hand, keeping the same assumptions on protests, this would transfer part of the investment from the bigger group to the smaller one and alter the ex-ante investment of the majority. Intuitively, it is not desirable to affect the ex-ante incentives of the most important investor.

# 3 Data and methodology

The following section describes the data sources and documents the construction of the local exposure to conflicts. We then present descriptive statistics on the average respondent in the Afrobarometer survey. Finally, we describe the empirical identification strategy. In short, we locate very precisely the respondents to our survey and compare individuals affected differently within the same region. This variation in exposure comes from (i) the proximity to a riot, (ii) the timing of the interview (before or after the event).

Before discussing data and empirical specifications, a small disclaimer: we do not pretend in this paper to analyze the causal effect of a protest on expectations of agents. It is difficult to exclude that riots respond to an omitted variable that may itself influence beliefs. Instead, as in the model, we consider that riots and protests are precisely the signals of this unobserved discontentment. Note however that our identification strategy relies on precise matching across time and space between social conflicts and interviews, and suggests that protests are not preceded by low trust in leaders, institutions or low beliefs in social coordination.

## 3.1 Data construction

The Afrobarometer is a qualitative survey conducted in 20 African countries.[4] We use the most recent rounds of this survey, i.e. rounds 3 and 4 conducted between 2005 and 2009, for which we can identify the date of interview and the precise location of respondents. All countries pooled together, we observe about $40,000$ individuals living in about $2,300$ districts and 220 regions.[5] The Afrobarometer gives a very detailed picture of their opinions regarding politics, religion, and social issues. In particular, the survey documents (i) trust of individuals regarding leaders in power, the parliament, institutions such as the army or the electoral commission , and (ii) the sentiment to belong to a community. We will use the expression of the sentiment to be part of a nation as an indirect proxy for future national cooperation (desire to participate in state building). As it is frequent with such surveys, education, income, and households characteristics are very poorly documented. On a more positive note, households can be located very precisely inside each region, which allows us to reconstitute the local environment of households in terms of exposure to conflicts for example. The reader interested in the detailed description of the method used to localize respondents can refer to the online appendix.

[4]Benin, Botswana, Burkina Faso, Cape Verde, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe.

[5]In this paper, we refer to region as the first level administrative area in a country. Information about districts are used to locate respondents inside each region.

The Armed Conflict Location and Event Dataset provides detailed information about conflicts in almost all African countries from 1997 onwards. Available information include the precise geographical coordinates, involved actors, the type of event (battles, riots, violences against civilians), the outcome of the conflict and, whether the conflict was covered by dominant media such as the BBC. More than $30,000$ of these events are documented and classified along rough categories, i.e. riots, battles, lobbying, protests, peace agreements. In this paper, we restrict ourselves to riots, protests, or violence against civilians. We refer to these events as "social conflicts" and interpret them as signals of social unrest. In addition, we take advantage of information on the repression of riots or protests and define events repressed by the authorities (government, official army, official police) as "social conflicts repressed by the government". We also use information about local occurrences of battles and other military events wars as control variables in estimations.[6]

From the precise geographical coordinates of events and districts, we match social conflicts and Afrobarometer's respondents if the event occurred within a $k$ kilometers radius from the place where the respondent is living. Although we arbitrary chose to set $k$ equals to 20, we also provide robustness checks of our results using $k = 5$, 10, 40. Together with the precise dates of conflicts and interviews, this matching procedure allows us to construct the exposure to both recent and past social conflicts at the individual level. For each individual, we define the exposure to recent social conflicts as the number of conflicts over the month immediately preceding the interview within the 20 kilometers radius. We define past exposure, i.e. the propensity to be affected by events, as the average number of events inside the same area between 2000 and 2003 for respondents interviewed in Afrobarometer's round 3, and between 2003 and 2006 for those interviewed in round 4. Except if differently specified, we use the term "social conflicts" to refer to *recent* events. The precise localization of respondents allows us to follow Nunn and Wantchekon (2011) and to construct the the distance to the coast as control variables for long-run determinants of trust. In addition, as attitudes may differ in more populated places and that cities may also be more prone to social conflicts, we construct from the Global Rural-Urban Mapping Project the population within a 20 kilometers around each respondent.

Table 4, presented in the appendix, gives the average profile of Afrobarometer's respondents and compares these characteristics along exposure to conflicts. In the right part of the table, we focus on individuals living in places without any social conflict since 1997 and individuals living in places with at least one social conflict since the same date. A large fraction (two third) of the sample is unemployed or inactive and a about one half of respondents

[6]In the online appendix, figure 3 anecdotally illustrates the location of civil conflicts or riots as reported in the ACLED dataset.

has no education or has only attained primary school. In places where conflicts have been reported in the past, surveyed individuals are relatively more educated.

We use a series of questions from the Afrobarometer to measure attitudes toward various subjects. The common phrasing of these questions is following: "*How much do you trust each of the following, or haven't you heard enough about them to say: The President?*". Answers are given on a four points ascending scale with 0 for "*Not at all*", 1 for "*A little bit*", 2 for "*A lot*", and 3 for "*A very great deal*". In addition to the question about trust in the president, we use questions related to "*the opposition party*", "*the ruling party*", "*the army*", "*the electoral commission*", "*the parliament*", "*the local government*", and "*traditional leaders*". In addition we use a question capturing the extent to which a respondent defines herself as being a member of the national community rather than of a "local" group. It is measured on a five points scale using answers to the following question of the Afrobarometer: "*Let us suppose that you had to choose between being a [respondent's nationality] and being a [respondent's ethnic group]. Which of the following best expresses your feelings?*".[7] Answers are given on a five points scale. The lowest item is "*I feel only [respondent's ethnic group]*", the third item is "*I feel equally [respondent's nationality] and [respondent's ethnic group]*", whereas the highest highest item is "*I feel only [respondent's nationality]*". In what follows, we refer to this question as "national feeling".

Table 5, presented in appendix, gives the average answers to the questions described earlier and unsurprisingly documents that trust in the president or in the ruling party is higher in places without past social conflicts or in places with no social conflicts during the past month. These cross-sectional differences are in line with the general intuition that social protests are the expressions of mistrust.

## 3.2 Estimation strategy

Our objective is to identify the response following social conflicts of a set of subjective opinions regarding leaders or institutions. To achieve this, we take advantage of the structure of the data presented above and rely on a comparison of individuals within the same region.

The match between respondents and conflicts offers room for heterogeneity in the immediate exposure to conflicts within the same region. Two individuals in the same region may be affected differently depending on their exact location. We exploit this variation and interact the proximity to the event with the time at which the interview took place. Formally,

[7] This phrasing is the phrasing of the fourth round of Afrobarometer. In the third round of the survey, the second part of the question is "*Which of these two groups do you feel most strongly attached to?*"

the baseline model we estimate using ordinary least squares is following:

$$y_i = \alpha + \beta \mathbb{C}_{jt} + \sum_{k=1}^{n} \gamma_k x_i^k + \sum_{k=1}^{m} \phi_k X_j^k + \mathbb{I}_r + \varepsilon_i, \tag{3}$$

where individual $i$ lives in place $j$ inside region $r$ and is interviewed at date $t$. Variable $y$ denotes the answer to one of the questions presented above. $\mathbb{C}_{jt}$ is the number of social conflicts within a 20 kilometers radius around place $j$ during the month immediately preceding the interview conducted at date $t$. Vector $x$ is a set of observable characteristics of individual $i$. Vector $X$ is a set of observable characteristics of place $j$, e.g. past conflicts, distance to the coast. $\mathbb{I}_r$ is a region fixed effect for region $r$ and $\varepsilon$ is the error term. In this equation, parameter $\beta$ captures how attitudes differ in places recently affected by social conflicts.

An implicit but important hypothesis on which this estimation strategy relies on is that the decision to conduct interviews is unrelated to the prevalence of social conflicts. This decision can be divided into two distinct steps: the choice of places and the choice of dates. For obvious reasons, it is difficult to argue or to test that long-run conflicts, whatever their type, do not influence the choice of places where interviews will be conducted. The second part of the decision can however be tested by looking at the occurrences of social conflicts around the time when interviews were conducted. In figure 1, we plot the daily empirical probability that social conflicts occur in places surveyed in the Afrobarometer. The probability of social conflicts is not different before or after the date of interview. Formal tests also strongly reject this hypothesis for any combination of time-windows around the date of interview.

# 4 Empirical evidence

This section presents the empirical results about beliefs in cooperation at the national level in the aftermath of social conflicts. We first focus on the evolution of beliefs in leaders in power, institutions which monitor the leader and alternatives to the state. Then, we provide complementary results exploiting the heterogeneity of the response.

## 4.1 Effect of civil conflicts on beliefs in national cooperation

In what follows, the estimated model is always given by equation (3) and only the outcomes will vary.[8]

[8]We only present estimated coefficients associated with the explanatory variables of interest, i.e. with recent social conflicts and recent social conflicts repressed by the government. Table 6 in appendix presents

Our theoretical framework predicts that agents will revise their beliefs in the quality of leaders in charge in the aftermath of a social conflict. Panel A of table 1 displays evidence that trust in leaders reported by respondents strongly deteriorates if riots or protests occurred in their neighborhood during the month that preceded the interview. Here we consider trust in the actual leader and potential alternative leaders, i.e. the president, the ruling party and the opposition party. Local conflicts in the month before the interview are associated with lower trust in current leaders and higher trust for competitors. In the first three columns of the table, we use the total number of social conflicts during the past month as variable of interest. Focusing only on events repressed by the government (in the right part of the table), the penalty imposed on the president and the ruling party is around twice larger.

The model crucially predicts that individuals revise their beliefs on fundamentals–the quality of institutions–once a signal of social unrest has been observed. Panel B of table 1 focuses on institutions exerting a monitoring power on the leaders, i.e. the army, the electoral commission, and the parliament.[9] Estimated coefficients show that trust in institutions with a monitoring power over leaders plunges in the aftermath of social conflicts. There is a strong negative effect on trust in the electoral commission. As we focus on riots or protests repressed by the government, the relationship between trust in the army becomes strongly and significantly negative. The army is indeed likely to be one of the actors of the repression. Trust in the parliament however does not seem to suffer in the aftermath of the riots. Overall, the trust in these monitoring institutions decreases together with trust in the president.

In panel C of table 1, we explore how trust in alternatives to the state and the beliefs in national coordination react to recent riots or protests. To achieve this, we use trust in the local government and in traditional leaders as proxies for the former, and the subjective membership of national community for the latter. These proxies capture how much agents are willing to invest locally rather than in national projects. Institutional alternatives to the state do not end up being stronger in absolute terms after a protest. Social conflicts reduce trust in the local government and leaves trust in traditional leaders unchanged. In relative terms however, people are more likely to define themselves as belonging to a local or ethnic group as belonging to the national community. This is especially true for riots or protests that have been repressed by the government. All in all, the sentiment to be part of a nation decreases following social conflicts.

As regards the amplitude of these effects, one more social conflict during the month preceding the interview reduces trust in the president by the equivalent of 15% of a standard

the estimated relationships between all co-variates and our nine dependent variables when the variables of interest, i.e. social conflicts, are not included in the regression.

[9]In many African countries, these institutions are considered by a large part of the population as tools for the leaders to lean on without any real monitoring power.

deviation of average trust computed across districts. On the opposite, trust in the opposition party or in traditional leaders increases by about 10% of a standard deviation following such an event. Similarly, the subjective membership of the national community is reduced by about 15% of standard deviation if there is one more social conflict repressed by the government around the place during the past month. Such effects are very important. One conflict is sufficient to bridge the gap of trust in the president between rural and urban areas. Similarly, the subjective membership of the national community decreases as much as to bridge the gap between post-secondary educated respondents and respondents without formal education. These rough comparisons suggest that the immediate effects of social conflicts on most of the dependent variables we used is sizeable and similar to long-run heterogeneity.

To summarize, these findings document a high volatility of trust toward nationwide institutions and belief about social coordination. Beliefs, and trust in particular, are heavily rooted in culture, but national cohesion is also frequently updated and strongly affected by sudden signals. In other words, such beliefs are not static, they have a substantial dynamic component.

Following our interpretation that conflicts are signals sent or the quality of a leader or the manifestations of a recent discovery, we analyze below whether the impulse response that we observe one month after the conflict was already present before. Given the strong auto-correlation of conflicts across space and time, it may be argued that our core result– beliefs deteriorate in the aftermath of social conflicts–is a by-product of a long-run deleterious environment, which both generate conflicts and distrust. In that case, we would only capture the fact that the obnoxious environment was deeply-rooted in the district. However, results presented below suggest that social conflicts can be interpreted as localized signals, revealing some information on the environment. Indeed, (i) social conflicts are not preceded by lower levels of trust regarding leaders or social coordination, and (ii) the response to social conflicts is stronger close to the focal point.

In table 2, we run the same regressions as above, but replace the number of conflicts that occurred during the month immediately preceding the interview by conflicts that occur during the month immediately following the interview. We hardly find any evidence to support that riots were preceded by low trust levels. Table 2 reproduces the main results presented in table 1 and captures trust as a function of conflicts occurring the month after the interview. No systematic pattern appears in the signs of the different coefficients. In addition, most of them are not statistically significant. The only exceptions are estimated coefficients of conflicts in columns 3 and 12 where the dependent variable is trust in the ruling party. Here, estimated coefficient are statistically significant, but positive (while the

baseline displayed negative coefficients). Conflicts do not seem to be preceded by a long-run obnoxious climate.

In tables 7, 8, and 9 presented in appendix, we change the radius (5, 10, and 40 kilometers) used to match Afrobarometer's respondents and conflicts and estimate the amplitude of the response for those different radius. Interestingly, the effects fade with the distance without disappearing. For example, the effect of social conflicts on trust in the president is equal to 0.080 for the 5 kilometers radius (table 7), to 0.075 for the 10 kilometers radius (table 8), to 0.070 for the 20 kilometers radius (table 1), and to 0.065 for the 40 kilometers radius (table 9). Two interpretations may arise. First, the access to information may restrict the reach of a signal which should be of interest of every citizens in the country–national grief, local reach. Second, the information is spread across the country but is only relevant for a certain region (e.g. inhabitants of a district learn that no new hospitals will be constructed in this region as opposed to other parts of the country)–local grief, national reach.[10]

## 4.2 Complementary results

A natural extension of the previous results is to analyze how the response might differ across the type of respondents. Following the predictions of our theoretical framework, we expect respondents to react differently to the observation at the origin of the social conflict depending on their environment (access to information, public infrastructures...) but not on their type (ethnicity). To this end, we take advantage of objective characteristics of respondents and of information documented by interviewers.

The first non-subjective information we exploit consists in respondents' ethnicity. This characteristics may to some extent capture ex-ante differences between individuals. These differences should not make them potential losers or winners from leaders' actions. In table 11 in appendix, we split the sample of Afrobarometer's respondents between those who belong to the main ethnic group in the country (panel A) and those who do not (panel B). Both groups change their subjective membership of the national community in very similar ways when social conflicts occur. In table 12 in appendix, we consider the main ethnic group in the region (panel A) against the others (panel B). Heterogeneity in responses is even less clear then. All in all, changes in distrust in leaders, institutions, and in beliefs in the national coordination is similar across the different ethnic groups following local social conflicts.

In the Afrobarometer, interviewers are asked to fill some questions about the existence of some facilities in the primary sample area. We use this information as a proxy for the

[10]Note that the decreasing pattern of coefficients as distance increase is not obvious for all dependent variables across tables 1, 7, 8, and 9. Formal tests of this pattern are presented in table 10, presented in appendix, for two of the dependent variables.

success of public projects. We construct an individual index of access to public goods that ranges from 0 to 5 as the sum of dummies when any of the following facility is present in the primary sample unit: clinic, electricity, school, police, or water.[11] We then compute the average of this index by country and wave and we split the sample between individuals whose access to public goods is above or below the average access to public goods in the country. Panel A of table 3 (respectively, panel B) displays the response of respondents with relatively more (less) access to public goods. Recent social conflicts have a larger effect among those who have relatively less access to public goods (see table 3). This result applies to trust in the president, trust in the ruling party, trust in the electoral commission, trust in the parliament, trust in the local government, and trust in the traditional leaders. Interestingly, those who have relatively more access to public goods seems to react even more to protests when looking at subjective membership of the national community. They may anticipate the reaction of their disadvantaged peers and expect to see less investment from them. In general, however, the response is larger for individuals living in an environment with low public expenditures.

These results paint social conflicts as arising from misbehaviors of leaders. We uncover some heterogeneity which may be related to the local environment. Importantly, the responses do not seem to differ along ethnicity. This observation limits the extent to which these social conflicts reflect ethnic disagreements with leaders favoring systematically one of the party.

So far we have identified shocks on beliefs and sentiments to be part of a country but we don't know whether they are permanent or purely transitory. The structure of the data (two repeated cross-section distant from several years) is not appropriate to estimate an impulse response following social conflicts. The only potential strategy is to use the variation in the time interval between a conflict and the interview and aggregate those disconnected observations to deduce an impulse response. An issue is that the specification with region fixed effects would be hard to interpret: the differential between a district and other districts of the same region can fade away either because beliefs have reverted back in the district, or because distrust has propagated to the neighbours. Consequently, we only consider country fixed effects and study the influence of the occurrence of conflicts in a 20 kilometer radius and in the administrative region.

We expect the dynamic evolution of beliefs to be different depending on the likelihood of social conflicts. In a country plagued by social conflicts, beliefs on fundamentals are less likely to be revised than in countries where such signals are rare. To capture this idea, we

[11] In our sample of Afrobarometer's respondents, the average value of this index equals 2.57 and the standard deviations is equal to 1.52.

split the sample between regions whose propensity to social conflicts is above or below the $75^{\text{th}}$ percentile administrative region of the sample.[12]

Accounting for those remarks, we run a slightly different specification than our baseline one:

$$y_i = \alpha + \sum_{k=1}^{L} \beta_{j,k} \mathbb{C}_{j,t-k} + \sum_{k=1}^{L} \beta_{r,k} \mathbb{C}_{r,t-k} + \sum_{k=1}^{n} \gamma_k x_i^k + \sum_{k=1}^{m} \phi_k X_j^k + \mathbb{I}_c + \varepsilon_i, \tag{4}$$

where individual $i$ lives in place $j$ inside region $r$ of country $c$ and has been interviewed at time $t$. Other notations are as specified in expression (3), except that $\mathbb{C}_{j,t-1}$ decribes social conflicts that occured in a 20 kilometer radius around place $j$ during the quarter immediately preceding the interview, and $\mathbb{C}_{j,t-2}$ decribes social conflicts that occured within the same area during the second quarter preceding the interview, etc. Variables $\mathbb{C}_{r,t-k}$ echo these quantities at the administrative region level. $\beta_{j,k}$ is the local response after $k$ quarters and $\beta_{r,k}$ is the response in neighboring districts after the same time. Here, we arbitrarily set $L = 3$ for expository purposes.

Figure 2(a) to 2(f) plot the changes induced by one more conflict during the three quarters immediately preceding the interview in a 20 kilometer radius and in the administrative region. Coefficients are estimated from expression (4), using trust in the president, trust in the parliament, and trust in the electoral commission as dependent variables.

As shown by 2(a), recent social conflicts have no statistically significant effect on trust in the president during the first two quarters in regions with low exposure to social conflicts. The effect shows up during the third quarter and is virtually identical depending on whether the event took place in the surrounding districts or in the immediate neighborhood. The evolution is rather different in regions with high past exposure to social conflicts as shown by 2(b). In these regions, trust in the president return to there initial level after one quarter. To conclude, the propagation across the country is immediate. However, in regions not often affected, the effect is slow to materialize but indicates a more fundamental revision of beliefs than in riots-prone regions. As shown by figures 2(c) to (f), the same dynamic feature appear for trust in institutions such as the parliament or the electoral commission. All in all, these results show that the persistence of the shocks differ in regions frequently exposed compared with regions where signals of discontentment are rare

Finally, we look at differences in reaction along differences in local ethnic polarization. For each place, we computed a fractionalization index following Alesina et al. (2003) and split the sample with respect to the median value.[13] As shown by estimated coefficients

[12] Choosing the median rather than the $75^{\text{th}}$ percentile to split the sample does not affect qualitatively the results presented below.

[13] Unlike polarization index *à la* Montalvo and Reynal-Querol (2005), this fractionalization index increases as the number of small groups in the population increases. It reaches a minimum when the population is

presented in table 13 in appendix, most reactions following social conflict take place in less fractionalized places. Interestingly, individuals living in more fractionalized places only revise their priors regarding the president and their subjective member of the national community. This can be interpreted as reflecting the fact that it is more convenient for leaders to cheat on isolated individuals, i.e. on individuals that live in fractionalized places. As a reaction, they do not revise their trust toward monitoring institutions as the latter would not be able anyway to protect them against misbehaving leaders.

# 5 Conclusion

This paper identifies the volatility of beliefs in leaders and institutions in the aftermath of protests. Our findings support the existence of different regimes in social coordination with sudden switches and explain unexpected overthrows. Our interpretation is that misbehaviors of leaders seem to be a spark which drags down beliefs in institutions and national cooperation. Estimates suggest that a series of social conflicts is able to drive beliefs very far from their initial level. Even though leaders might change, the shock will drive down beliefs in fundamentals and consequently expectations in future coordination.

Yet, we can identify three limits to our work. First, we consider as an interesting feature of our empirical framework that it relies on very localized responses and small time windows. It allows a cleaner identification than a macro-analysis. It would be however very interesting to capture the propagation of distrust over time and regions. The implication of our results would be quite different if the effect was amplified nation-wide or confined to a city or a district. Unfortunately, such an analysis is hardly implementable: surveys are not conducted frequently enough.

Second, empirical observations presented in this paper match predictions from a simple theoretical framework. In this framework, taxes are voluntary contributions and agents can refuse to provide any tax revenue to a corrupted state. This trait accounts for the possibility to invest more or less in the state effort. An extension would be to test the response of real economic counterparts, i.e. the size of tax revenues and capture long-run changes in the weakness of the state.

Finally, we cannot fully rule out competing explanations for our empirical results. First, we can be capturing a behavioral response of agents. After a protest, they feel more secure when declaring that they distrust the government. Such a behavioral response is possible but contradicts the observation that the response tends to be even stronger when the government

formed by a single group and a maximum when the population is formed by an infinite number if small groups.

violently represses the protests. Second, the revision on the institutions may reflect that the riot in itself questions the future viability of the state: agents revise their beliefs not because of a misbehavior of leaders but because the protest announces periods of unrest. This interpretation is not consistent with the differences along the access to public goods. In addition, we find that the amplitude of responses after riots repressed byt he government tend to be larger than for riots unrepressed.

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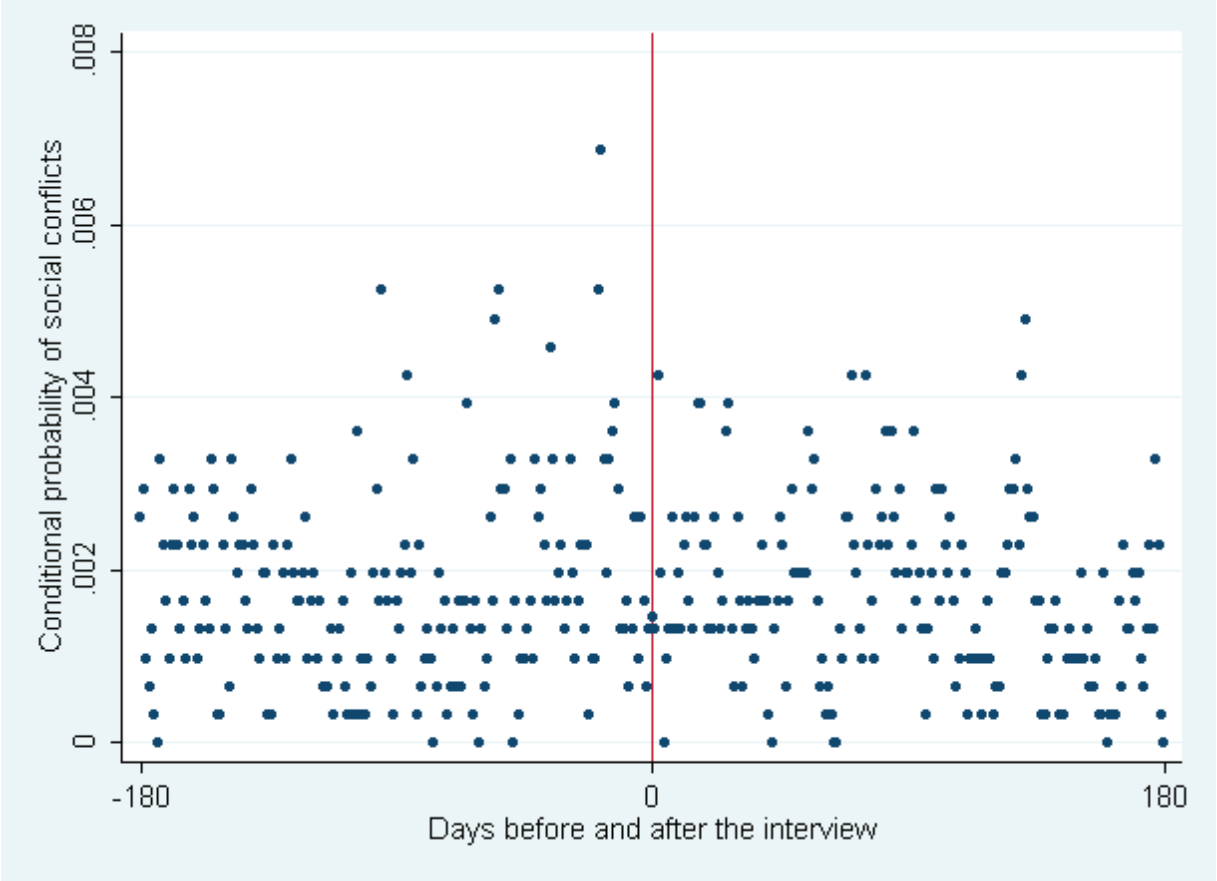
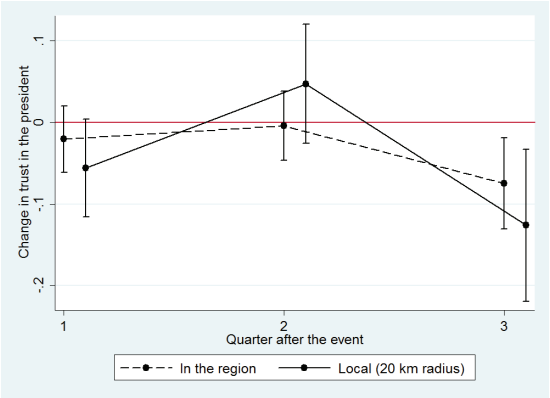
Figure 1: Daily empirical probability of conflicts before and after the date of interview.

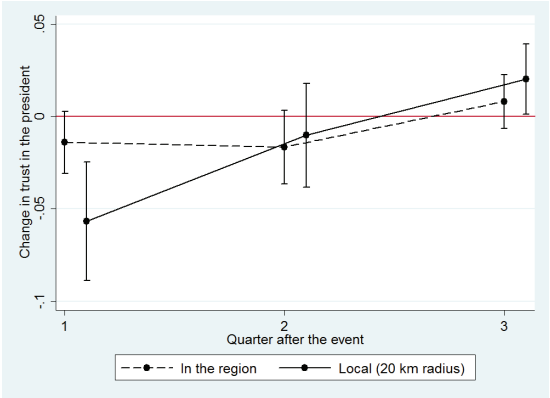



For places where people have been interviewed in the Afrobarometer, the figure plots the daily empirical probability of social conflicts before and after the interview.

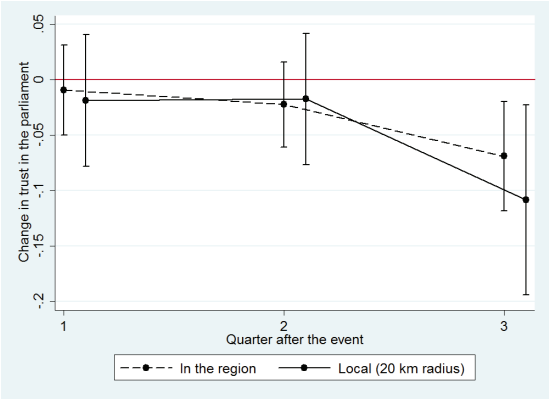
Figure 2: Dynamic response to social conflicts.



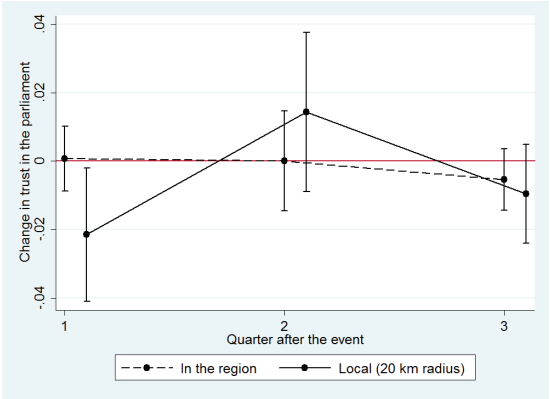

(a) Trust in the president in regions with low exposure to social conflicts.



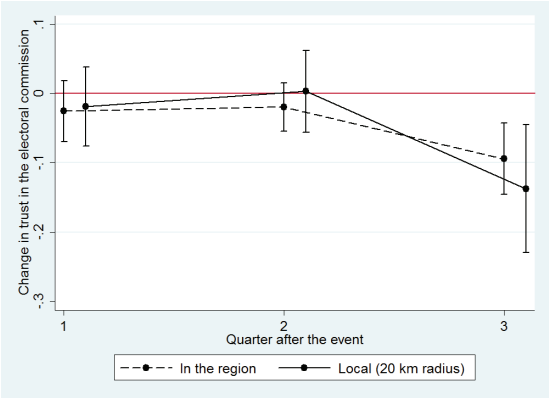

(b) Trust in the president in regions with high exposure to social conflicts.



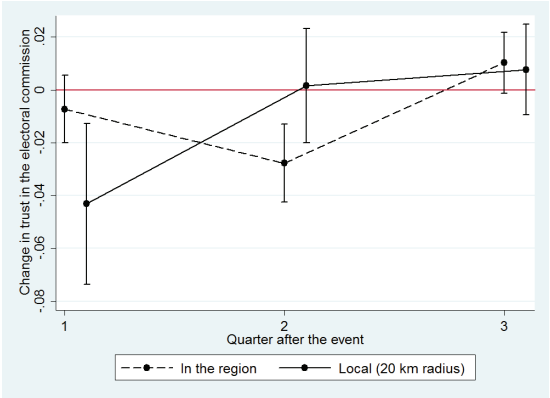

(c) Trust in the parliament in regions with low exposure to social conflicts.




(d) Trust in the parliament in regions with high exposure to social conflicts.




(e) Trust in the electoral commission in regions with low exposure to social conflicts.




(f) Trust in the electoral commission in regions with high exposure to social conflicts.

The figures plot the estimated coefficients from separate regressions of trust in the president, in the parliament, and in the electoral commission on conflicts in a 20 kilometers radius and in the administrative region during the three quarters preceding the interview. All regressions include individual and local characteristics as in other regressions presented in this paper, except that region × round fixed effects have been replaced by country × round fixed effects. Confidence intervals around point estimates correspond to the 95% confidence interval. The sample is split according to the $75^{\text{th}}$ percentile administrative region of the sample in term of past exposure to social conflicts.

Table 1: Effect of recent social conflicts on trust in leaders and in institutions.

Dependent variables in columns' heads.

**Panel A:** Trust in leaders

| | (1) Trust in Opp. party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Opp. party | (5) Trust in President | (6) Trust in Ruling party |
|---|---|---|---|---|---|---|
| Social conflicts | 0.038*** | -0.065*** | -0.036*** | | | |
| | (0.011) | (0.011) | (0.012) | | | |
| Social conflicts repressed by the gov. | | | | 0.071 | -0.157*** | -0.073 |
| | | | | (0.046) | (0.047) | (0.048) |
| Observations | 37,769 | 39,470 | 38,800 | 37,769 | 39,470 | 38,800 |
| R-squared | 0.115 | 0.272 | 0.253 | 0.115 | 0.271 | 0.253 |

**Panel B:** Trust in institutions

| | (1) Trust in Army | (2) Trust in Electoral Comm. | (3) Trust in Parliament | (4) Trust in Army | (5) Trust in Electoral Comm. | (6) Trust in Parliament |
|---|---|---|---|---|---|---|
| Social conflicts | 0.003 | -0.040*** | -0.014 | | | |
| | (0.014) | (0.011) | (0.011) | | | |
| Social conflicts repressed by the gov. | | | | -0.221** | -0.090* | -0.056 |
| | | | | (0.095) | (0.047) | (0.045) |
| Observations | 17,973 | 37,049 | 38,242 | 17,973 | 37,049 | 38,242 |
| R-squared | 0.305 | 0.250 | 0.208 | 0.305 | 0.250 | 0.208 |

**Panel C:** Feeling to be part of a nation

| | (1) Trust in Local gov. | (2) Trust in Trad. leaders | (3) National Feeling | (4) Trust in Local gov. | (5) Trust in Trad. leaders | (6) National Feeling |
|---|---|---|---|---|---|---|
| Social conflicts | -0.011 | 0.029 | -0.007 | | | |
| | (0.010) | (0.024) | (0.013) | | | |
| Social conflicts repressed by the gov. | | | | -0.070 | 0.139* | -0.148** |
| | | | | (0.043) | (0.078) | (0.063) |
| Observations | 38,086 | 19,744 | 38,586 | 38,086 | 19,744 | 38,586 |
| R-squared | 0.198 | 0.174 | 0.188 | 0.198 | 0.174 | 0.188 |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. OLS regressions. All regressions include region × round fixed effects and a constant term. The following co-variates are also included: age gender, a dummy equal to 1 if the respondent is household head, dummies for race and religion, a dummy equal to 1 if housing is rural, dummies for education level and employment status, dummies equal to 1 if the respondent belong to the main or the second ethnic group in country or region, past battles and social conflicts in a 20 kilometers radius, the (log of) the distance to the coast, and the (log of) population in a 20 kilometers radius. *Social conflicts* is the number of social conflicts in a 20 kilometers radius over the month immediately preceding the interview. *Social conflicts repressed by the government* include only events repressed by the government. See the text for the definition of dependent variables.

Table 2: Effect of future social conflicts on dependent variables.

Depent variables in columns' heads.

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | -0.020 | 0.013 | 0.031** | -0.018 | -0.002 | -0.000 | -0.002 | 0.014 | 0.022 |
| | (0.014) | (0.014) | (0.014) | (0.023) | (0.014) | (0.013) | (0.013) | (0.027) | (0.015) |
| Observations | 37,769 | 39,470 | 38,800 | 17,973 | 37,049 | 38,242 | 38,086 | 19,744 | 38,586 |
| R-squared | 0.116 | 0.271 | 0.253 | 0.305 | 0.250 | 0.208 | 0.198 | 0.175 | 0.188 |
| | (10) Trust in Opposition party | (11) Trust in President | (12) Trust in Ruling party | (13) Trust in Army | (14) Trust in Electoral comm. | (15) Trust in Parliament | (16) Trust in Local gov. | (17) Trust in Traditional leaders | (18) National Feeling |
| Social conflicts | -0.033 | 0.060 | 0.082** | 0.087 | 0.035 | 0.016 | 0.053 | 0.066 | -0.001 |
| repressed by the gov. | (0.039) | (0.039) | (0.038) | (0.075) | (0.039) | (0.039) | (0.038) | (0.061) | (0.047) |
| Observations | 37,769 | 39,470 | 38,800 | 17,973 | 37,049 | 38,242 | 38,086 | 19,744 | 38,586 |
| R-squared | 0.116 | 0.271 | 0.253 | 0.305 | 0.250 | 0.208 | 0.198 | 0.175 | 0.188 |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. OLS regressions. All regressions include region × round fixed effects and a constant term. The following co-variates are also included: age gender, a dummy equal to 1 if the respondent is household head, dummies for race and religion, a dummy equal to 1 if housing is rural, dummies for education level and employment status, dummies equal to 1 if the respondent belong to the main or the second ethnic group in country or region, past battles and social conflicts in a 20 kilometers radius, the (log of) the distance to the coast, and the (log of) population in a 20 kilometers radius. *Social conflicts* is the number of social conflicts in a 20 kilometers radius over the month immediately following the interview. *Social conflicts repressed by the government* include only events repressed by the government. See the text for the definition of dependent variables.

Table 3: Effect of recent social conflicts on various beliefs, depending on access to public goods.

Depent variables in columns' heads.

**Panel A**: Access to public goods above average access in country

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.032** | -0.054*** | -0.029* | -0.018 | -0.033** | 0.002 | 0.006 | -0.067* | -0.021 |
| | (0.014) | (0.015) | (0.015) | (0.017) | (0.014) | (0.014) | (0.014) | (0.039) | (0.017) |
| Social conflicts | 0.045 | -0.093* | -0.011 | -0.230** | -0.032 | -0.005 | -0.001 | -0.038 | -0.289*** |
| repressed by the gov. | (0.055) | (0.056) | (0.055) | (0.113) | (0.054) | (0.052) | (0.049) | (0.115) | (0.078) |

**Panel B**: Access to public goods below average access in country

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.023 | -0.089*** | -0.061*** | 0.031 | -0.061*** | -0.035 | -0.054*** | 0.070*** | -0.009 |
| | (0.020) | (0.022) | (0.023) | (0.030) | (0.022) | (0.022) | (0.021) | (0.025) | (0.023) |
| Social conflicts | -0.055 | -0.291*** | -0.194* | -0.067 | -0.299*** | -0.208** | -0.347*** | 0.321*** | -0.124 |
| repressed by the gov. | (0.099) | (0.106) | (0.110) | (0.199) | (0.108) | (0.104) | (0.101) | (0.096) | (0.111) |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. OLS regressions. Each cell presents the coefficient of recent conflicts from a single regression. All regressions include region × round fixed effects and a constant term. The following co-variates are also included: age gender, a dummy equal to 1 if the respondent is household head, dummies for race and religion, a dummy equal to 1 if housing is rural, dummies for education level and employment status, dummies equal to 1 if the respondent belong to the main or the second ethnic group in country or region, past battles and social conflicts in a 20 kilometers radius, the (log of) the distance to the coast, and the (log of) population in a 20 kilometers radius. *Social conflicts* is the number of social conflicts in a 20 kilometers radius over the month immediately preceding the interview. *Social conflicts repressed by the government* include only events repressed by the government. See the text for the definition of dependent variables. Panel **A** includes only respondents whose access to public good is above average access to publics goods in country. Panel **B** includes only respondents whose access to public good is below average access to publics goods in country. Individual access to public good ranges from 0 to 5. It increases by 1 when any of the following facility is present in the primary sample unit: clinic, electricity, school, police, or water.

# Appendix

Table 4: Descriptive statistics: average observable characteristics of respondents.

| | | Recent social conflicts | | Past social concflicts | |
|---|---|---|---|---|---|
| | Full sample | $> 0$ | $= 0$ | $> 0$ | $= 0$ |
| Age | 35.922 | 32.514 | 36.181 | 34.395 | 36.826 |
| Male | 0.504 | 0.501 | 0.504 | 0.504 | 0.504 |
| Household head | 0.485 | 0.436 | 0.488 | 0.478 | 0.488 |
| White | 0.005 | 0.004 | 0.005 | 0.004 | 0.005 |
| Mixed | 0.007 | 0.017 | 0.006 | 0.008 | 0.006 |
| Other | 0.003 | 0.003 | 0.003 | 0.003 | 0.004 |
| Islam | 0.253 | 0.199 | 0.257 | 0.203 | 0.282 |
| Catholic / Protestant | 0.687 | 0.768 | 0.681 | 0.748 | 0.651 |
| Traditional religion | 0.02 | 0.007 | 0.021 | 0.012 | 0.025 |
| Other | 0.012 | 0.004 | 0.012 | 0.013 | 0.011 |
| Rural housing | 0.657 | 0.24 | 0.689 | 0.484 | 0.76 |
| Primary school | 0.353 | 0.22 | 0.363 | 0.305 | 0.381 |
| Secondary school | 0.333 | 0.485 | 0.321 | 0.41 | 0.287 |
| Post-secondary education | 0.1 | 0.21 | 0.091 | 0.152 | 0.069 |
| Unemployed | 0.315 | 0.344 | 0.312 | 0.3 | 0.323 |
| Par time | 0.15 | 0.167 | 0.149 | 0.156 | 0.146 |
| Full time | 0.196 | 0.224 | 0.194 | 0.214 | 0.186 |
| Main ethnic group in region | 0.494 | 0.546 | 0.49 | 0.454 | 0.517 |
| Main ethnic group in country | 0.279 | 0.288 | 0.278 | 0.255 | 0.293 |
| Second ethnic group in region | 0.141 | 0.138 | 0.142 | 0.141 | 0.142 |
| Second ethnic group in region | 0.171 | 0.11 | 0.175 | 0.171 | 0.17 |
| Past battles | 2.489 | 7.291 | 2.124 | 6.486 | 0.123 |
| Past social conflicts | 9.303 | 87.6 | 3.361 | 25.022 | 0 |
| Past social conflicts repressed by the gov. | 2.022 | 21.957 | 0.509 | 5.438 | 0 |
| Distance to the coast | 5.52 | 5.214 | 5.543 | 5.228 | 5.693 |
| Local population | 9.72 | 13.267 | 9.451 | 11.502 | 8.666 |
| Observations | 40,713 | 2,872 | 37,841 | 15,137 | 25,576 |

Except *age*, *past battles*, *past social conflicts*, *past social conflicts repressed by the government*, *distance to the coast*, and *local population*, all variables are dummy variables. The reference category for *white*, *mixed*, and *other* is "black". The reference category for education's levels is "no formal education". The reference category for employment status is "inactive". Variables *distance to the coast*, and *local population* are used in logarithm. Out of the $40,713$ respondents, $18,637$ have been interviewed in round 3 of the Afrobarometer and $22,076$ in round 4.

Table 5: Descriptive statistics: average answers of respondents.

Unit of observation: respondent

| | Full sample | | Recent social conflicts $> 0$ | Recent social conflicts $= 0$ | Past social concflicts $> 0$ | Past social concflicts $= 0$ |
|---|---|---|---|---|---|---|
| Trust in opposition party | 1.22 | (1.07) | 1.25 | 1.22 | 1.23 | 1.21 |
| Trust in president | 1.92 | (1.12) | 1.34 | 1.96 | 1.73 | 2.06 |
| Trust in ruling party | 1.66 | (1.15) | 1.13 | 1.70 | 1.46 | 1.81 |
| Trust in army | 1.95 | (1.11) | 1.49 | 1.99 | 1.84 | 2.05 |
| Trust in electoral commission | 1.61 | (1.13) | 1.14 | 1.65 | 1.40 | 1.78 |
| Tust in parliament | 1.71 | (1.08) | 1.37 | 1.74 | 1.55 | 1.84 |
| Trust in local government | 1.64 | (1.10) | 1.32 | 1.66 | 1.49 | 1.76 |
| Trust in traditional leaders | 1.97 | (1.08) | 1.82 | 1.98 | 1.83 | 2.07 |
| National feeling | 3.47 | (1.20) | 3.36 | 3.47 | 3.45 | 3.48 |

Unit of observation: place

| | Full sample | | Recent social conflicts $> 0$ | Recent social conflicts $= 0$ | Past social concflicts $> 0$ | Past social concflicts $= 0$ |
|---|---|---|---|---|---|---|
| Trust in opposition party | 1.23 | (0.51) | 1.10 | 1.24 | 1.18 | 1.26 |
| Trust in president | 1.92 | (0.69) | 1.28 | 1.94 | 1.68 | 2.04 |
| Trust in ruling party | 1.65 | (0.68) | 1.08 | 1.67 | 1.41 | 1.77 |
| Trust in army | 1.86 | (0.76) | 1.27 | 1.89 | 1.66 | 1.97 |
| Trust in electoral commission | 1.61 | (0.68) | 1.11 | 1.63 | 1.35 | 1.74 |
| Tust in parliament | 1.72 | (0.63) | 1.25 | 1.74 | 1.51 | 1.83 |
| Trust in local government | 1.63 | (0.62) | 1.15 | 1.65 | 1.42 | 1.75 |
| Trust in traditional leaders | 1.95 | (0.58) | 1.66 | 1.96 | 1.77 | 2.04 |
| National feeling | 3.45 | (0.66) | 3.29 | 3.45 | 3.41 | 3.46 |

See the text for the definitions of the different variables. Standard deviations in parentheses. In the upper part of the table, statistics are computed using respondents as observation's units. In the bottom part of the table, individual observations have been averaged by place before the computations of statistics.

Table 6: Estimates of the relationships between co-variates and dependent variables.

Dependent variables in columns' heads.

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Age | -0.000 | 0.004*** | 0.003*** | 0.002*** | 0.002*** | 0.002*** | 0.002*** | 0.003*** | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.001) | (0.000) | (0.000) | (0.000) | (0.001) | (0.000) |
| Male | 0.086*** | -0.021* | -0.036*** | 0.080*** | -0.018 | -0.006 | -0.018 | -0.018 | 0.066*** |
| | (0.011) | (0.011) | (0.011) | (0.015) | (0.011) | (0.011) | (0.011) | (0.016) | (0.012) |
| Household head | -0.000 | 0.011 | -0.002 | 0.006 | -0.005 | -0.011 | -0.012 | -0.009 | 0.004 |
| | (0.013) | (0.012) | (0.013) | (0.018) | (0.013) | (0.013) | (0.013) | (0.018) | (0.014) |
| White | -0.042 | -0.069 | -0.296*** | -0.157 | -0.129 | -0.099 | -0.211** | -0.211 | 0.151* |
| | (0.094) | (0.092) | (0.097) | (0.118) | (0.094) | (0.092) | (0.094) | (0.152) | (0.090) |
| Mixed | 0.154** | 0.010 | -0.161** | 0.044 | -0.089 | -0.020 | -0.046 | -0.355*** | -0.012 |
| | (0.065) | (0.069) | (0.074) | (0.095) | (0.069) | (0.069) | (0.065) | (0.103) | (0.077) |
| Other | 0.037 | -0.116 | -0.014 | -0.090 | -0.096 | 0.081 | 0.062 | -0.157 | -0.099 |
| | (0.103) | (0.093) | (0.092) | (0.154) | (0.088) | (0.085) | (0.094) | (0.133) | (0.109) |
| Islam | 0.094** | 0.000 | 0.044 | 0.119** | 0.063* | 0.089** | 0.080** | -0.065 | 0.154*** |
| | (0.038) | (0.035) | (0.038) | (0.051) | (0.038) | (0.037) | (0.037) | (0.053) | (0.043) |
| Catholic / Protestant | 0.017 | 0.072** | 0.080** | 0.092** | 0.097*** | 0.111*** | 0.058* | -0.127*** | 0.176*** |
| | (0.034) | (0.032) | (0.034) | (0.047) | (0.034) | (0.033) | (0.034) | (0.048) | (0.039) |
| Traditional religion | 0.062 | 0.020 | 0.020 | -0.024 | 0.033 | 0.092* | 0.036 | 0.004 | 0.090 |
| | (0.052) | (0.049) | (0.052) | (0.072) | (0.053) | (0.051) | (0.051) | (0.070) | (0.061) |
| Other | 0.001 | 0.027 | 0.071 | 0.066 | 0.098 | 0.072 | 0.051 | 0.040 | 0.210*** |
| | (0.062) | (0.060) | (0.063) | (0.110) | (0.065) | (0.063) | (0.064) | (0.075) | (0.068) |
| Rural housing | -0.027** | 0.109*** | 0.127*** | 0.061*** | 0.105*** | 0.075*** | 0.115*** | 0.139*** | -0.057*** |
| | (0.014) | (0.013) | (0.013) | (0.018) | (0.014) | (0.013) | (0.013) | (0.020) | (0.014) |
| Primary school | -0.057*** | 0.023 | 0.012 | 0.036 | -0.017 | -0.034** | -0.034** | -0.083*** | 0.140*** |
| | (0.017) | (0.016) | (0.017) | (0.022) | (0.017) | (0.017) | (0.017) | (0.022) | (0.018) |
| Secondary school | -0.072*** | -0.060*** | -0.119*** | -0.009 | -0.106*** | -0.134*** | -0.164*** | -0.239*** | 0.199*** |
| | (0.019) | (0.017) | (0.018) | (0.025) | (0.018) | (0.018) | (0.018) | (0.024) | (0.020) |
| Post-secondary education | -0.050** | -0.164*** | -0.202*** | -0.062* | -0.182*** | -0.199*** | -0.237*** | -0.335*** | 0.205*** |
| | (0.023) | (0.022) | (0.023) | (0.032) | (0.023) | (0.023) | (0.023) | (0.033) | (0.025) |
| Unemployed | -0.028** | -0.046*** | -0.026* | -0.008 | -0.045*** | -0.044*** | -0.035** | -0.002 | -0.004 |
| | (0.014) | (0.013) | (0.014) | (0.019) | (0.014) | (0.014) | (0.014) | (0.019) | (0.015) |
| Par time | 0.002 | -0.032** | -0.020 | 0.022 | -0.025 | -0.025 | -0.005 | 0.001 | 0.034* |
| | (0.017) | (0.016) | (0.016) | (0.023) | (0.017) | (0.016) | (0.016) | (0.023) | (0.018) |
| Full time | 0.012 | 0.022 | 0.023 | 0.039* | 0.015 | 0.019 | 0.038** | 0.011 | 0.090*** |
| | (0.017) | (0.015) | (0.016) | (0.021) | (0.016) | (0.016) | (0.016) | (0.024) | (0.017) |
| Main ethnic group in region | 0.026 | -0.036** | -0.030* | 0.002 | -0.012 | 0.000 | 0.009 | 0.054** | -0.080*** |
| | (0.016) | (0.015) | (0.016) | (0.023) | (0.016) | (0.016) | (0.016) | (0.021) | (0.017) |
| Main ethnic group in country | -0.041** | 0.042** | 0.013 | -0.012 | -0.002 | -0.008 | -0.027 | -0.011 | 0.085*** |
| | (0.020) | (0.018) | (0.019) | (0.026) | (0.019) | (0.019) | (0.019) | (0.025) | (0.020) |

Continued on next page

Table 6: (continued)

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Second ethnic group in country | -0.040* | 0.051** | 0.070*** | -0.002 | 0.082*** | 0.038* | 0.057*** | -0.095*** | 0.093*** |
| | (0.022) | (0.020) | (0.021) | (0.030) | (0.022) | (0.021) | (0.021) | (0.031) | (0.023) |
| Second ethnic group in region | 0.016 | -0.027 | -0.002 | -0.015 | 0.005 | 0.007 | 0.001 | 0.032 | -0.046** |
| | (0.018) | (0.017) | (0.017) | (0.025) | (0.018) | (0.017) | (0.017) | (0.023) | (0.019) |
| Past battles | -3.343** | -5.043*** | -1.924 | 0.405 | -0.152 | -3.795** | -3.329** | -0.907 | -5.711*** |
| | (1.698) | (1.662) | (1.650) | (2.766) | (1.644) | (1.588) | (1.619) | (2.105) | (1.954) |
| Past social conflicts | 3.984** | -4.936** | -5.271*** | -10.405*** | -4.474** | 0.336 | -2.772 | 1.169 | 0.351 |
| | (1.955) | (1.933) | (1.912) | (3.067) | (1.930) | (1.816) | (1.858) | (2.539) | (2.279) |
| Past social conflicts | -16.518** | 21.821*** | 18.616** | 44.026*** | 16.077** | -0.745 | 10.502 | 0.953 | 2.260 |
| repressed by the gov. | (7.657) | (7.622) | (7.509) | (12.431) | (7.653) | (7.172) | (7.365) | (9.743) | (8.189) |
| Distance to the coast | 0.001 | 0.034*** | 0.021** | 0.027** | 0.017** | 0.023*** | 0.033*** | -0.001 | 0.003 |
| | (0.009) | (0.008) | (0.008) | (0.012) | (0.009) | (0.008) | (0.008) | (0.012) | (0.010) |
| Local population | 0.001 | 0.002 | 0.002 | 0.002 | 0.003* | 0.004** | 0.002 | -0.004* | -0.001 |
| | (0.002) | (0.001) | (0.002) | (0.002) | (0.002) | (0.001) | (0.002) | (0.002) | (0.002) |
| Observations | 37,769 | 39,470 | 38,800 | 17,973 | 37,049 | 38,242 | 38,086 | 19,744 | 38,586 |
| R-squared | 0.116 | 0.271 | 0.253 | 0.305 | 0.250 | 0.208 | 0.198 | 0.175 | 0.188 |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. OLS regressions. All regressions include region × round fixed effects and a constant term. Except *age*, *past battles*, *past social conflicts*, *past social conflicts repressed by the government*, *distance to the coast*, and *local population*, all variables are dummy variables. The reference category for *white*, *mixed*, and *other* is "black". The reference category for education's levels is "no formal education". The reference category for employment status is "inactive". Variables *distance to the coast*, and *local population* are used in logarithm.

Table 7: Effect of recent social conflicts on dependent variables, 5 kilometers radius.

Depent variables in columns' heads.

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.038*** | -0.080*** | -0.051*** | -0.015 | -0.048*** | -0.009 | -0.017 | 0.011 | -0.017 |
| | (0.012) | (0.012) | (0.012) | (0.015) | (0.012) | (0.012) | (0.011) | (0.025) | (0.014) |
| Observations | 37,769 | 39,470 | 38,800 | 17,973 | 37,049 | 38,242 | 38,086 | 19,744 | 38,586 |
| R-squared | 0.116 | 0.272 | 0.253 | 0.305 | 0.250 | 0.208 | 0.198 | 0.175 | 0.188 |
| | (10) Trust in Opposition party | (11) Trust in President | (12) Trust in Ruling party | (13) Trust in Army | (14) Trust in Electoral comm. | (15) Trust in Parliament | (16) Trust in Local gov. | (17) Trust in Traditional leaders | (18) National Feeling |
| Social conflicts | 0.128** | -0.242*** | -0.116* | -0.320*** | -0.184*** | -0.061 | -0.102* | 0.085 | -0.171** |
| repressed by the gov. | (0.059) | (0.064) | (0.065) | (0.105) | (0.064) | (0.062) | (0.057) | (0.104) | (0.079) |
| Observations | 37,769 | 39,470 | 38,800 | 17,973 | 37,049 | 38,242 | 38,086 | 19,744 | 38,586 |
| R-squared | 0.116 | 0.271 | 0.253 | 0.306 | 0.250 | 0.208 | 0.198 | 0.175 | 0.188 |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. OLS regressions. All regressions include region × round fixed effects and a constant term. The following co-variates are also included: age gender, a dummy equal to 1 if the respondent is household head, dummies for race and religion, a dummy equal to 1 if housing is rural, dummies for education level and employment status, dummies equal to 1 if the respondent belong to the main or the second ethnic group in country or region, past battles and social conflicts in a 5 kilometers radius, the (log of) the distance to the coast, and the (log of) population in a 5 kilometers radius. *Social conflicts* is the number of social conflicts in a 5 kilometers radius over the month immediately preceding the interview. *Social conflicts repressed by the government* include only events repressed by the government. See the text for the definition of dependent variables.

Table 8: Effect of recent social conflicts on dependent variables, 10 kilometers radius.

Depent variables in columns' heads.

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.034*** | -0.075*** | -0.043*** | -0.020 | -0.044*** | -0.010 | -0.017 | 0.014 | -0.016 |
| | (0.011) | (0.011) | (0.012) | (0.014) | (0.011) | (0.011) | (0.011) | (0.024) | (0.013) |
| Observations | 37,769 | 39,470 | 38,800 | 17,973 | 37,049 | 38,242 | 38,086 | 19,744 | 38,586 |
| R-squared | 0.116 | 0.272 | 0.253 | 0.305 | 0.250 | 0.208 | 0.198 | 0.175 | 0.188 |
| | (10) Trust in Opposition party | (11) Trust in President | (12) Trust in Ruling party | (13) Trust in Army | (14) Trust in Electoral comm. | (15) Trust in Parliament | (16) Trust in Local gov. | (17) Trust in Traditional leaders | (18) National Feeling |
| Social conflicts | 0.090* | -0.160*** | -0.050 | -0.271*** | -0.125** | -0.016 | -0.082* | 0.092 | -0.160** |
| repressed by the gov. | (0.051) | (0.054) | (0.055) | (0.093) | (0.053) | (0.051) | (0.048) | (0.095) | (0.071) |
| Observations | 37,769 | 39,470 | 38,800 | 17,973 | 37,049 | 38,242 | 38,086 | 19,744 | 38,586 |
| R-squared | 0.116 | 0.271 | 0.253 | 0.306 | 0.250 | 0.208 | 0.198 | 0.175 | 0.188 |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. OLS regressions. All regressions include region × round fixed effects and a constant term. The following co-variates are also included: age gender, a dummy equal to 1 if the respondent is household head, dummies for race and religion, a dummy equal to 1 if housing is rural, dummies for education level and employment status, dummies equal to 1 if the respondent belong to the main or the second ethnic group in country or region, past battles and social conflicts in a 10 kilometers radius, the (log of) the distance to the coast, and the (log of) population in a 10 kilometers radius. *Social conflicts* is the number of social conflicts in a 10 kilometers radius over the month immediately preceding the interview. *Social conflicts repressed by the government* include only events repressed by the government. See the text for the definition of dependent variables.

Table 9: Effect of recent social conflicts on dependent variables, 40 kilometers radius.

Depent variables in columns' heads.

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.036*** | -0.065*** | -0.045*** | -0.007 | -0.052*** | -0.028*** | -0.019** | -0.002 | -0.000 |
| | (0.009) | (0.009) | (0.009) | (0.011) | (0.009) | (0.009) | (0.009) | (0.019) | (0.010) |
| Observations | 37,769 | 39,470 | 38,800 | 17,973 | 37,049 | 38,242 | 38,086 | 19,744 | 38,586 |
| R-squared | 0.116 | 0.272 | 0.254 | 0.305 | 0.251 | 0.208 | 0.198 | 0.174 | 0.188 |
| | (10) Trust in Opposition party | (11) Trust in President | (12) Trust in Ruling party | (13) Trust in Army | (14) Trust in Electoral comm. | (15) Trust in Parliament | (16) Trust in Local gov. | (17) Trust in Traditional leaders | (18) National Feeling |
| Social conflicts | 0.058* | -0.172*** | -0.136*** | -0.123*** | -0.155*** | -0.121*** | -0.093*** | 0.065 | -0.098** |
| repressed by the gov. | (0.033) | (0.034) | (0.034) | (0.042) | (0.032) | (0.031) | (0.031) | (0.057) | (0.046) |
| Observations | 37,769 | 39,470 | 38,800 | 17,973 | 37,049 | 38,242 | 38,086 | 19,744 | 38,586 |
| R-squared | 0.116 | 0.272 | 0.254 | 0.305 | 0.250 | 0.208 | 0.198 | 0.175 | 0.188 |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. OLS regressions. All regressions include region × round fixed effects and a constant term. The following co-variates are also included: age gender, a dummy equal to 1 if the respondent is household head, dummies for race and religion, a dummy equal to 1 if housing is rural, dummies for education level and employment status, dummies equal to 1 if the respondent belong to the main or the second ethnic group in country or region, past battles and social conflicts in a 40 kilometers radius, the (log of) the distance to the coast, and the (log of) population in a 40 kilometers radius. *Social conflicts* is the number of social conflicts in a 40 kilometers radius over the month immediately preceding the interview. *Social conflicts repressed by the government* include only events repressed by the government. See the text for the definition of dependent variables.

Table 10: Formal tests of the decreasing relationship between matching's radius and the effect of social conflicts.

P-values for $H_0$: $\beta_i > \beta_j$

$\beta$ estimated when the dependent variable is *trust in the president* and all social conflicts are taken into account.

| | $\beta_j$'s radius | | |
|---|---|---|---|
| $\beta_i$'s radius | 10 km | 20 km | 40 km |
| 5 km | 0.095 | 0.092 | 0.069 |
| 10 km | | 0.196 | 0.136 |
| 20 km | | | 0.254 |

$\beta$ estimated when the dependent variable is *national feeling* and only social conflicts repressed by the government are taken into account.

| | $\beta_j$'s radius | | |
|---|---|---|---|
| $\beta_i$'s radius | 10 km | 20 km | 40 km |
| 5 km | 0.385 | 0.824 | 0.152 |
| 10 km | | 0.958 | 0.152 |
| 20 km | | | 0.007 |

The table presents p-values associated to the following hypothesis: $\beta_i > \beta_j$, where $\beta_i$ and $\beta_j$ are the coefficients associated to recent social conflicts for the same dependent variable but for different matching's radius. The left part of the table corresponds to tests of coefficients estimated when the dependent variable is *trust in the president* and all social conflicts are taken into account (column 2 in panel A of table 1 and columns 2 of tables 7, 8, and 9). The right part of the table correspond to tests of coefficients estimated when the dependent variable is *national feeling* and only social conflicts repressed by the government are taken into account (column 6 in panel C of table 1 and columns 18 of tables 7, 8, and 9).

Table 11: Effect of recent social conflicts on various beliefs, depending on being member of the main ethnic group in country.

Depent variables in columns' heads.

**Panel A**: Individuals in the main ethnic group in country

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.009 | -0.122*** | -0.089*** | 0.011 | -0.078*** | -0.056*** | -0.060*** | 0.023 | -0.041 |
| | (0.023) | (0.021) | (0.022) | (0.046) | (0.021) | (0.021) | (0.021) | (0.052) | (0.026) |
| Social conflicts | -0.015 | -0.356*** | -0.286*** | 0.129 | -0.164* | -0.144* | -0.260*** | 0.098 | -0.247** |
| repressed by the gov. | (0.090) | (0.086) | (0.090) | (0.321) | (0.089) | (0.081) | (0.087) | (0.123) | (0.101) |

**Panel B:** Individuals not in the main ethnic group in country

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.045*** | -0.060*** | -0.033** | 0.003 | -0.035*** | 0.001 | -0.002 | 0.029 | -0.019 |
| | (0.012) | (0.013) | (0.014) | (0.015) | (0.013) | (0.013) | (0.012) | (0.026) | (0.014) |
| Social conflicts | 0.092 | -0.164*** | -0.067 | -0.232** | -0.132** | -0.035 | -0.053 | 0.138 | -0.267*** |
| repressed by the gov. | (0.057) | (0.061) | (0.060) | (0.108) | (0.059) | (0.059) | (0.054) | (0.099) | (0.081) |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. OLS regressions. Each cell presents the coefficient of recent conflicts from a single regression. All regressions include region × round fixed effects and a constant term. The following co-variates are also included: age gender, a dummy equal to 1 if the respondent is household head, dummies for race and religion, a dummy equal to 1 if housing is rural, dummies for education level and employment status, past battles and social conflicts in a 20 kilometers radius, the (log of) the distance to the coast, and the (log of) population in a 20 kilometers radius. *Social conflicts* is the number of social conflicts in a 20 kilometers radius over the month immediately preceding the interview. *Social conflicts repressed by the government* include only events repressed by the government. See the text for the definition of dependent variables. Panel **A** includes only respondents who belong to the main ethnic group in the country. Panel **B** includes only respondents who do not belong to the main ethnic group in the country.

Table 12: Effect of recent social conflicts on various beliefs, depending on being member of the main ethnic group in region.

Depent variables in columns' heads.

**Panel A**: Individuals in the main ethnic group in region

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.021 | -0.059*** | -0.028 | 0.008 | -0.047*** | -0.006 | -0.010 | 0.027 | -0.020 |
| | (0.015) | (0.016) | (0.017) | (0.022) | (0.016) | (0.016) | (0.015) | (0.030) | (0.017) |
| Social conflicts | 0.020 | -0.248*** | -0.153** | -0.149 | -0.171** | -0.038 | -0.126* | 0.104 | -0.151** |
| repressed by the gov. | (0.069) | (0.072) | (0.078) | (0.142) | (0.073) | (0.069) | (0.070) | (0.091) | (0.076) |

**Panel B:** Individuals not in the main ethnic group in region

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.042*** | -0.065*** | -0.049*** | -0.007 | -0.051*** | -0.018 | -0.018 | -0.003 | -0.020 |
| | (0.015) | (0.015) | (0.015) | (0.018) | (0.015) | (0.015) | (0.015) | (0.039) | (0.019) |
| Social conflicts | 0.129** | -0.147** | -0.096 | -0.280** | -0.148** | -0.060 | -0.067 | 0.044 | -0.266** |
| repressed by the gov. | (0.066) | (0.070) | (0.065) | (0.121) | (0.065) | (0.063) | (0.061) | (0.150) | (0.111) |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. OLS regressions. Each cell presents the coefficient of recent conflicts from a single regression. All regressions include region × round fixed effects and a constant term. The following co-variates are also included: age gender, a dummy equal to 1 if the respondent is household head, dummies for race and religion, a dummy equal to 1 if housing is rural, dummies for education level and employment status, past battles and social conflicts in a 20 kilometers radius, the (log of) the distance to the coast, and the (log of) population in a 20 kilometers radius. *Social conflicts* is the number of social conflicts in a 20 kilometers radius over the month immediately preceding the interview. *Social conflicts repressed by the government* include only events repressed by the government. See the text for the definition of dependent variables. Panel **A** includes only respondents who belong to the main ethnic group in the region. Panel **B** includes only respondents who do not belong to the main ethnic group in the region.

Table 13: Effect of recent social conflicts on various beliefs, depending on local ethnic fractionalization.

Depent variables in columns' heads.

**Panel A**: More fractionalized places

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.028** | -0.076*** | -0.040*** | 0.039** | -0.016 | -0.008 | 0.001 | 0.011 | -0.032* |
| | (0.014) | (0.015) | (0.016) | (0.019) | (0.015) | (0.015) | (0.014) | (0.025) | (0.017) |
| Social conflicts | 0.051 | -0.078 | 0.007 | -0.091 | 0.009 | 0.030 | -0.012 | 0.073 | -0.286*** |
| repressed by the gov. | (0.058) | (0.060) | (0.060) | (0.130) | (0.059) | (0.056) | (0.054) | (0.104) | (0.097) |

**Panel B**: Less fractionalized places

| | (1) Trust in Opposition party | (2) Trust in President | (3) Trust in Ruling party | (4) Trust in Army | (5) Trust in Electoral comm. | (6) Trust in Parliament | (7) Trust in Local gov. | (8) Trust in Traditional leaders | (9) National Feeling |
|---|---|---|---|---|---|---|---|---|---|
| Social conflicts | 0.035** | -0.058*** | -0.036** | -0.013 | -0.078*** | -0.021 | -0.031* | 0.167*** | -0.014 |
| | (0.017) | (0.017) | (0.018) | (0.023) | (0.017) | (0.017) | (0.017) | (0.060) | (0.020) |
| Social conflicts | 0.061 | -0.278*** | -0.214** | -0.273* | -0.319*** | -0.172** | -0.189** | 0.271** | -0.157* |
| repressed by the gov. | (0.082) | (0.079) | (0.084) | (0.142) | (0.083) | (0.079) | (0.081) | (0.126) | (0.094) |

*** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. OLS regressions. Each cell presents the coefficient of recent conflicts from a single regression. All regressions include region × round fixed effects and a constant term. The following co-variates are also included: age gender, a dummy equal to 1 if the respondent is household head, dummies for race and religion, a dummy equal to 1 if housing is rural, dummies for education level and employment status, dummies equal to 1 if the respondent belong to the main or the second ethnic group in country or region, past battles and social conflicts in a 20 kilometers radius, the (log of) the distance to the coast, and the (log of) population in a 20 kilometers radius. *Social conflicts* is the number of social conflicts in a 20 kilometers radius over the month immediately preceding the interview. *Social conflicts repressed by the government* include only events repressed by the government. See the text for the definition of dependent variables. Panel **A** includes only respondents who live in a place that is characterized by a fractionalization index above the median. Panel **B** includes only respondents who live in a place that is characterized by a fractionalization index below the median. For each place, the fractionalization index is constructed following Alesina et al. (2003).

# Online appendix

## Geo-location of Afrobarometer's respondents

This section presents procedures used to geo-locate respondents interviewed in rounds 3 and 4 of the Afrobarometer.

### Relevant information in the Afrobarometer

Rounds 3 and 4 of the Afrobarometer survey give names of the country and the region in which respondents are living, but also the name of the "district".[14] The precise definition of the latter information varies across countries and do not always match with official administrative areas.

All in all, the two rounds of the Afrobarometer list 2,377 different places where 53,110 respondents live. They are disseminated in 20 different countries. The procedures presented below allow to locate all places and respondents.

### Geo-location procedures

Following Nunn and Wantchekon (2011), we use the website *GeoNames.org*[15] to find geographical coordinates of places listed in the Afrobaromter. This website allows to send precise requests using names of places, but makes also publicly available background data. These data contains the latitude and the longitude of a tremendous number of places around the world. Documentation attached to each place also include variations of its name. We first used an algorithm to search for Afrobarometer's places that can me located using names or variations of names proposed in data from *GeoNames.org*. We then changed the name of some places registered with evident accents errors or typos in the Afrobarometer and ran the same process as above.[16] This first step allowed to get the geographical coordinates of more than 80% of places.

The second method we used for places not yet located is simply made of individual hand requests to retrieve information on *GeoNames.org* taken over from *Wikipedia.org*.[17] Still un-matched places where located using other websites: *MapAtlas.org*, *iTouchMap.com*, and *Fallingrain.com*.[18] Among places located using one of the latter websites, around one third

[14] Respondents interviewed in Lesotho during round 4 represent an exception. Only the name of the region is available for these observations.

[15] `http://www.geonames.org`

[16] For example, "Abeïbara" in Mali does not match with data from *GeoNames.org* whereas "Abeibara" does. Similarly, the suffixes "urban" or "municipal" are added to the name of some cities.

[17] `http://www.wikipedia.org`

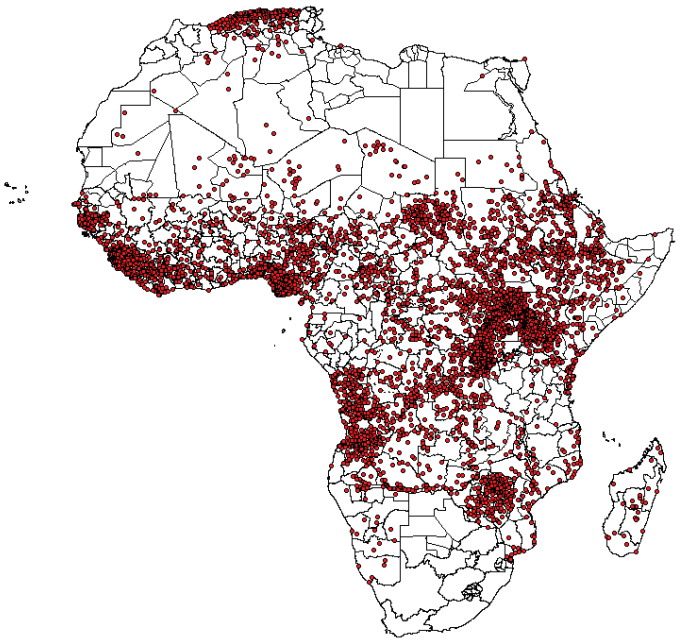
[18] `http://en.mapatlas.org`, `http://itouchmap.com`, and `http://www.fallingrain.com`.

were located using the centroid of the region as we were not able to determine the location of the district within the administrative region.

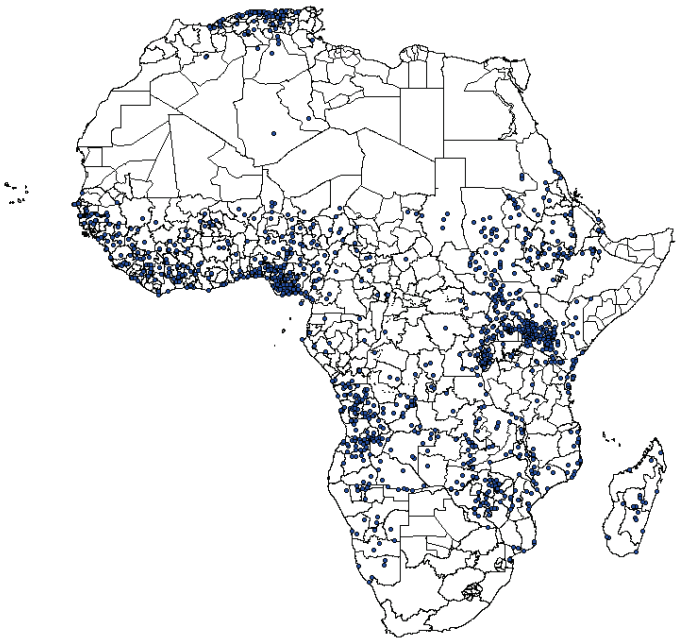
Finally, we used a geographic information system to look for potential mismatches. We found out that the longitude and the latitude of 16 places located them in wrong countries. This was mostly the case for places very close to a boundary. We manually change geographical coordinates of these places using the same websites as above.

Table 14 summarizes the number of places located using one of the above described matching procedures. Table 15 presents the associated frequency of individual observations in rounds 3 and 4 of the Afrobarometer. Table 16 decomposes table 14 by country. Finally, figure 4 represents the points where interviewed individuals are located.

Figure 3: Location of civil conflicts and riots.



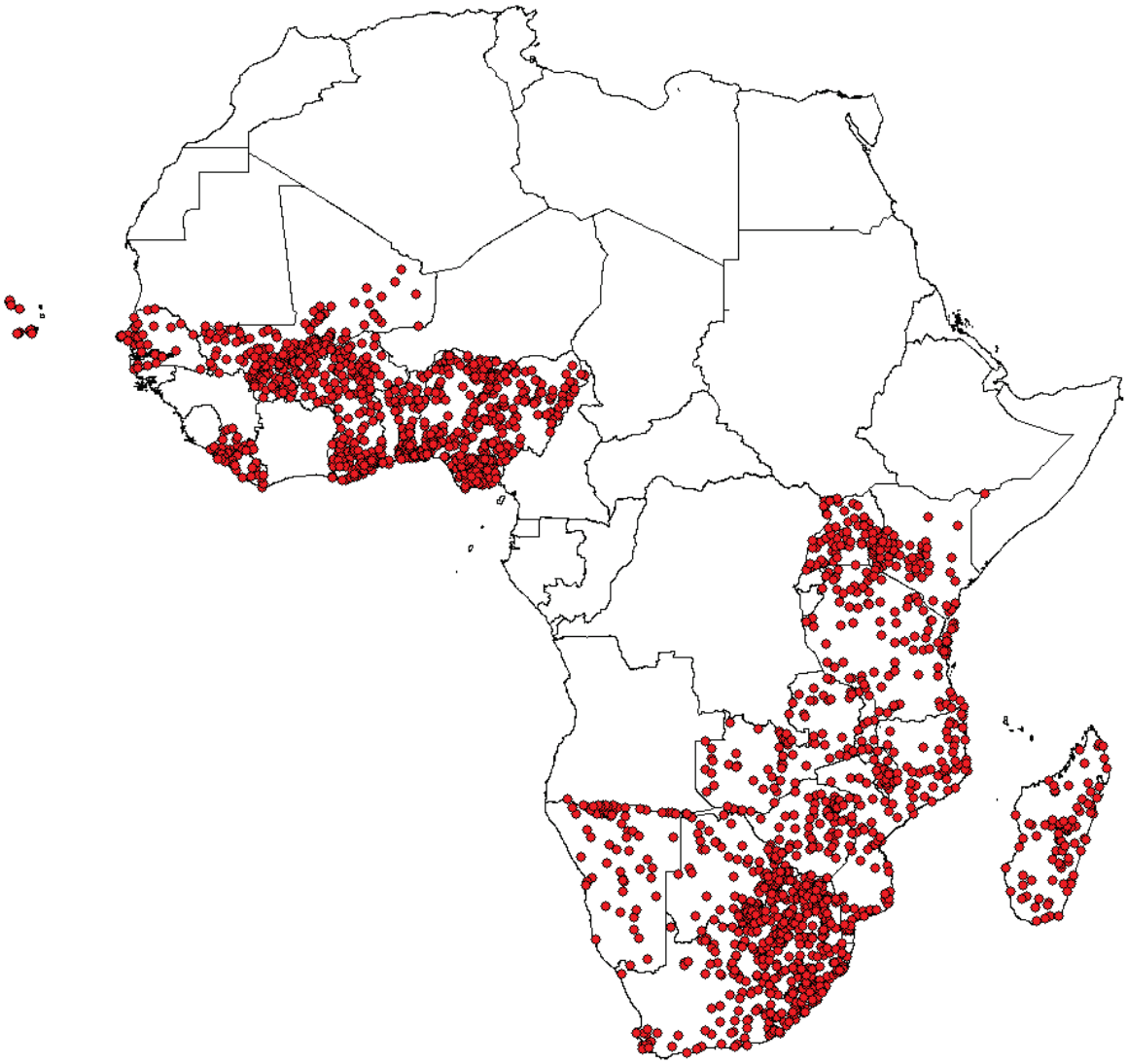
(a) All events (including civil wars).



(b) Riots.

Source: ACLED (1997-2009).

Figure 4: Location of respondents interviewed in rounds 3 and 4 of the Afrobarometer.



Source: Authors' localization using the Afrobarometer. See the text for details.

Table 14: Distribution of successful matching processes at the place level.

| | Places | Percentage |
|---|---|---|
| Geonames.org | 1,615 | 67.94 |
| Geonames.org (2) | 467 | 19.65 |
| Hand requests on Geonames.org | 87 | 3.66 |
| Hand requests on different websites | 126 | 5.30 |
| Hand requests on different websites (2) | 66 | 2.78 |
| Hand corrections | 16 | 0.67 |
| Total | 2,377 | 100.00 |

**Geonames.org** refers to places located using data from *Geonames.org*. **Geonames.org (2)** refers to places located using data from *Geonames.org* after names corrections. **Hand requests on Geonames.org** refers to places located using information on *GeoNames.org* taken over from *Wikipedia.org*. **Hand requests on different websites** refers to places located using *MapAtlas.org*, *iTouchMap.com*, and *Fallingrain.com*. **Hand requests on different websites (2)** refers to places located at the region level using the latter method. **Hand corrections** refers to places whose location was corrected because of proximity from countries' boundaries. See the text for more details.

Table 15: Distribution of successful matching processes at the respondent level.

| | Respondents | Percentage |
|---|---|---|
| Geonames.org | 40,962 | 77.13 |
| Geonames.org (2) | 8,837 | 16.64 |
| Hand requests on Geonames.org | 892 | 1.68 |
| Hand requests on different websites | 1,558 | 2.93 |
| Hand requests on different websites (2) | 561 | 1.06 |
| Hand corrections | 300 | 0.56 |
| Total | 53,110 | 100.00 |

See footnote of table 14.

Table 16: Distribution of successful matching processes at the place level, by country.

| | Geonames.org | Geonames.org (2) | Hand requests on Geonames.org | Hand requests on different websites | Hand requests on different websites (2) | Hand corrections | Total by country |
|---|---|---|---|---|---|---|---|
| Benin | 76 | 5 | 2 | | | | 83 |
| Botswana | 73 | 27 | 10 | 19 | 9 | 2 | 140 |
| Burkina Faso | 61 | 9 | | 3 | | | 73 |
| Cape Verde | 18 | 9 | | | | | 27 |
| Ghana | 65 | 63 | | 2 | | | 130 |
| Kenya | 62 | 6 | | | | 3 | 71 |
| Lesotho | 12 | | | 1 | | | 13 |
| Liberia | 23 | 16 | 2 | 11 | 2 | | 54 |
| Madagascar | 76 | 21 | | | | | 97 |
| Malawi | 27 | | | 1 | | | 28 |
| Mali | 119 | 57 | 33 | 7 | 17 | 1 | 234 |
| Mozambique | 91 | 25 | | 2 | 1 | | 119 |
| Namibia | 68 | 28 | 1 | 6 | 2 | 3 | 108 |
| Nigeria | 273 | 85 | 4 | 21 | 22 | 1 | 406 |
| Senegal | 35 | 8 | | | | 1 | 44 |
| South Africa | 288 | 52 | 34 | 42 | 11 | 3 | 430 |
| Tanzania | 73 | 31 | | 8 | 2 | | 114 |
| Uganda | 58 | 1 | | | | | 59 |
| Zambia | 73 | 1 | | 1 | | 1 | 76 |
| Zimbabwe | 44 | 23 | 1 | 2 | | 1 | 71 |

See footnote of table 14.